

45th Edition

1<sup>st</sup> to 15<sup>th</sup> Sep, 2017

# Dairy Pulse

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Entrepreneur Development Domain**

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# Dairy Pulse 45<sup>th</sup> Edition (1<sup>st</sup> to 15<sup>th</sup>, Sep 2017)

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## Suruchi endeavor in Skill/ Entrepreneur Development Domain

### ➔ *Diploma in Dairy Technology (DDT) in alliance with IGNOU*

Study Center authorized by School of Agriculture  
Indira Gandhi National Open University (IGNOU)  
Details as below:

Academy of Dairy Skill Development (ADSKiD)  
Unit of Suruchi Consultants  
C-49, Sector-65, Noida U.P – 201307  
SC/PSC Code: 39018P  
Prog. In-charge: Mr. Sanjay Singhal  
Contact no. : +91-0120+4370845  
Email: [adskid39018p@gmail.com](mailto:adskid39018p@gmail.com)

New admissions are Closed for July, 2017

### ➔ *Aspiring entrepreneurs might attend our introductory session (Free) on how to set up dairy farm and plant on every 2<sup>nd</sup> and 4<sup>th</sup> Saturday of month from 2 PM to 5 PM, Prior registration is must and for that contact our office.*

For more information please email on [info@suruchiconsultants.com](mailto:info@suruchiconsultants.com) or contact at +91 0120 4320845

### ➔ *51st Dairy Entrepreneurship Development Program (DEDP) at Suruchi Consultants, C-49, Sec-65, Noida 29<sup>th</sup>, 30<sup>th</sup> & 31<sup>st</sup> Oct, 2017 with Guided Tour to a Dairy Farm plus a milk processing plant.*

For more information please follow the link:  
[http://www.suruchiconsultants.com/pageDownloads/downloads/training/3\\_49th%20DEDP%20BROCHURE%20.pdf](http://www.suruchiconsultants.com/pageDownloads/downloads/training/3_49th%20DEDP%20BROCHURE%20.pdf)

### ➔ *Suruchi is launching 2<sup>nd</sup> Second Level Dairy Entrepreneurship Development Program (DEDP- Level II) 2017 one week intensive hand on Dairy Plant. To be held on 3<sup>rd</sup> to 8<sup>th</sup> Oct, 2017.*

For more information please email on [info@suruchiconsultants.com](mailto:info@suruchiconsultants.com) or contact at +91 0120 4320845

### ➔ *Suruchi is launching 1<sup>st</sup> Second Level Dairy Entrepreneurship Development Program (DEDP- Level II) 2017 one week intensive hand on Dairy Farm. Dates will be announced soon.*

For more information please email on [info@suruchiconsultants.com](mailto:info@suruchiconsultants.com) or contact at +91 0120 4320845

### ➔ *Suruchi is launching 1<sup>st</sup> Global Dairy Entrepreneurship Development Program (GDEDP) the dates will announce soon.*

For more information please follow the link:

[http://www.suruchiconsultants.com/pageDownloads/downloads/training/5\\_1st%20%20GDEDP%20BROCHURE.pdf](http://www.suruchiconsultants.com/pageDownloads/downloads/training/5_1st%20%20GDEDP%20BROCHURE.pdf)

### ➔ *Suruchi has launched 1<sup>st</sup> Online Dairy Entrepreneurship Development Program (ODEDP). It is 12 weeks program. Registrations are open. Watch Video: <https://www.youtube.com/watch?v=5iS432VIGc8&t=42s>*

For more information please visit on website <http://skilldairy.com/>

### Animal Health/Protection

#### Dairy farmers can get sexed semen for native cattle breeds within India

TNN | Sep 1, 2017, 07:42 IST

<http://timesofindia.indiatimes.com/city/chandigarh/dairy-farmers-can-get-sexed-semen-for-native-cattle-breeds-within-india/articleshow/60315931.cms>

**C**handigarh: For the first time, dairy farmers will now have the option of [sexed semen for desi cattle](#) breeds like Sahiwal, Gir and Red Sindhi cows and Murrah buffaloes. Sexed genetics, which is used to produce offspring of a desired sex, was not available for these breeds till now.

ABS India (ABS), a division of Genus Plc, on Thursday launched 'sexed dairy genetics' in Chandigarh. The technology is designed to deliver more high-value pregnancies to dairy herds countrywide. Priced differently for different genetics, ABS Sexcel will be available to the Indian dairy farmers at approximately 30-40% less than the import price of the sexed semen.

At a press conference to announce the launch, British deputy high commissioner, Andrew Ayre said, "It is an important day for the UK and the Indian dairy industry to extend Sexcel benefits to

Indian dairy farmers, helping them to double their income by 2022 as targeted by the government."

Arvind Gautam, managing director, ABS India said it would give farmers a new option for achieving their desired genetic blueprint and would help them profit through genetic progress. "We have a unique product and trial results are very effective. For the first time, sexed semen of indigenous cattle breeds like Sahiwal, Red Sindhi and Gir cows and Murrah buffaloes is available in India."

Rahul Gupta, head (production) of the company added, "Dairy farmers may now breed their cows with the sexed genetics specifically designed to produce more female cows using this new technology. The technology produces female sexed semen through a new, cutting edge, laser-kill technology."

## Marketing

### Baba Ramdev: Patanjali to enter dairy, apparel businesses this year

Patanjali Ayurved founder Baba Ramdev says the total market size of dairy and apparel business will be Rs20 trillion, takes potshots at Hindustan Unilever

Last Published: Fri, Sep 15 2017. 12 00 AM IST

**P**atanjali Ayurved Ltd will launch products in the dairy and apparel business this calendar year, said its founder Ramdev.

“With this we will be in 11 categories,” Ramdev said on the sidelines of Globoil India 2017, an edible oil conclave. “The total market size (of these two categories) will be Rs20 lakh crore. We will enter both within this year.”

Ramdev also took aim at Hindustan Unilever Ltd (HUL), India’s largest consumer packaged goods firm.

“We are number one in trust and we will be No. 1 in turnover in a year,” he said. “We have done shirshasan (laid down) of many large companies. Only Unilever is left.”

“What are foreign companies doing for India? What has Hindustan Unilever done for Hindustan, what gate has Colgate opened, and what birds has Nestlé given flight to?” Ramdev asked at the event.

HUL, the maker of iconic brands including Lux, Surf Excel, Fair & Lovely and Kissan, had an annual turnover of Rs34,487 crore in fiscal year 2017 (FY17), making it the country’s largest fast-moving consumer goods company. That same year, Patanjali Ayurved’s turnover stood at Rs10,561 crore and the firm announced it will cross sales of Rs20,000-25,000 crore in FY18, Mint reported on 4 May. The company sells Ayurvedic personal care and food products, including flagship toothpaste brand Dant Kanti. It launched a packaged drinking water brand called Divya Jal last month, Mint reported on 30 August.

“I have the trust of over 100 crore people of India, and I am converting this trust, faith, loyalty into a brand with no personal wealth,” said Ramdev.

An HUL spokesperson said, “We have no comments to offer.”



## Keventer Agro raises USD 25 mn to grow dairy, agri businesses

Published: September 14, 2017 6:27 PM IST

<http://www.india.com/news/agencies/keventer-agro-raises-usd-25-mn-to-grow-dairy-agri-businesses-2471664/>

“We have secured a capital of USD 25 million (about Rs 170 crore) from Mandala Capital. The capital raised will be utilised for future expansion plans,” a company statement said here.

Keventer Agro is currently on an aggressive growth, path eyeing significant surge in its business scale. The company has revamped its business strategy and to this effect, the governing board of the company has rearranged the key functions of its top management.

“We have charted out a robust growth plan for each of our businesses, namely dairy, banana or frozen foods. With this fresh infusion of capital, we intend to invest about USD 100 million into our dairy business in West Bengal within the next five years and grow our food processing business exponentially – all towards our endeavour of turning into a USD 500 million company by 2022,” Keventer Agro Chairman and Managing Director Mayank Jalan said.

With an objective to become one of the leading dairy companies in Eastern India, KAL Group-owned Metro Dairy will see a four-fold increase

in production from the current 2.5 lakh litres a day to 1 million litres a day, he said.

Established in 1986, the company acquired the Kolkata franchise of Edward Keventer’s operations and now aims to take the 127 years legacy in food & dairy to new heights.

The Rs 800 crore Keventer Agro is the flagship enterprise of Rs 1,800 crore Keventer Group which has diverse interests in food and beverage, hospitality, realty, infrastructure and exports.

Mandala Capital currently holds a portfolio which includes organisations across the spectrum of food related businesses such as seeds, biotechnology, sugar, biochemical, irrigation, food processing, solar, agro-financing, logistics and cold chain, dairy, beverages and fresh produce.

“We believe there is significant potential in the food processing sector and Keventer Agro has all the right ingredients to become the leading player in Eastern India,” Mandala Capital managing partner Uday Garg said.

## Mother Dairy, Maha Govt tie up for processing plant

<http://www.thehindubusinessline.com/news/national/nddb-mother-dairy-maha-govt-tie-up-for-processing-plant/article9854317.ece>

AHMEDABAD, SEPT 11:

**T**he Maharashtra Government and Mother Dairy Fruit and Vegetable Pvt. Ltd, a subsidiary of National Dairy Development Board (NDDB), on Monday, announced signing of a lease agreement to set up a state-of-the-art milk and milk products processing plant.

Maharashtra Chief Minister Devendra Fadnavis, and NDDB Chairman Dilip Rath were among those present on the occasion in Mumbai.

As per the MoU, a dairy development initiative will begin in Vidarbha and Marathwada regions to provide access to milk producers to markets in Nagpur and Mumbai. Apart from transferring the Nagpur dairy on lease and land for setting up a new dairy at Gove Bhiwandi, Maharashtra will provide assistance, including funds, for a

coordinated approach to improve productivity through animal breeding, nutrition and health.

Mother Dairy has already initiated milk procurement operations in Amravati, Wardha, Nagpur, Chandrapur, Nanded, Osmanabad, Buldana and Yavatmal. At present, about 11,437 milk pourers in 573 operational Milk Pooling Points (MPPs), covering 924 villages are collectively pouring about 70,580 litres of milk per day. All the milk producers are receiving payment directly in their bank accounts. A total of Rs. 37.1 crore has been paid to milk producers from November 2016 until August 2017.

The Nagpur dairy plant has been refurbished and liquid milk packed at the dairy is being marketed in Nagpur city, Rath informed.

## Rajasthan's biggest cow milk dairy plant to be set up in Ajmer

Updated: Sep 10, 2017, 06:15 IST

<http://timesofindia.indiatimes.com/city/jaipur/rajsthans-biggest-cow-milk-dairy-plant-to-be-set-up-in-ajmer/articleshow/60444215.cms>

**J**AIPUR: Ajmer is set to get Rajasthan's biggest cow milk dairy plant. Chief minister Vasundhara Raje would soon lay the foundation stone for the Rs 253-crore dairy plant in Ajmer, co-operative minister Ajay Singh Klick said. The plant will be exclusively dedicated for the processing of cow milk, he said.

"This is the first dairy plant for cow milk processing set up in the state. Considering the demand for cow milk, the proposed plant would go a long way in meeting the need. Also, the dairy farmers will get remunerative price for the milk," the minister said.

An MoU for the dairy plant would be signed shortly, Klick added.

Rajasthan is among the top five milk producing states in the country. The state also caters to the demand for milk in the national capital Delhi. State's milk brand Saras is one of the top brands and also the highest paying milk co-operative in the country.

Rajasthan Co-operative Dairy Federation (RCDF) is one of the biggest dairy co-operatives in the country, collecting 24 lakh litres of milk per day, on an average. It has milk collection unions in 21



districts of the state with a turnover of over Rs 4,500 crore.

He claimed that the Gopalan department paid a subsidy of Rs 133 crore to 1,191 gaushalas in the state.

There was no provision for subsidy to gaushalas earlier, he said. Under chief minister Vasundhara Raje's stewardship, the Gopalan department was created for the first time in the state and special attention has been given to the development and upkeep of the gaushalas.

Rs 225 crore for the welfare of cows was generated through cess on stamp duty which would be utilized for the storage of fodder and water facilities, the minister said.

Rajasthan is the only state in India which has a dedicated cow ministry. Rajasthan government had imposed a 10% cow cess as surcharge on stamp duty for protection and propagation of cows in the state in 2016. The surcharge will be applicable on non-judicial instruments. The cess will have a bearing on cost of making documents like property sale or lease deeds, rent agreements, mortgage, et al.

## AAVIN introduces milk packets for Rs 10

Published: September 8, 2017 7:35 PM IST

<http://www.india.com/news/agencies/aavin-introduces-milk-packets-for-rs-10-2458935/>

**T**amil Nadu Co-operative Milk Producers' Federation Ltd, popularly known as AAVIN, widening its product portfolio, today introduced milk packets at Rs 10.

The State-government backed firm already retails milk packets in 500 ml and one litre quantities produced from its manufacturing outlets.

The company has milk dairies at Ambattur, Madhavaram, Sholinganallur producing 11.50 lakh litres of mil per day.

Milk and Dairy Development Minister K T Rajenthra Bhalaji at a function held today, introduced the 225 ml milk packets that will be sold for Rs 10 at the retail outlets, three type of

ice-cream variants and re-introduced AAVIN Delight milk.

The AAVIN Delight milk is available in 500 ml packet and come with a shelf life of 90 days. It is priced at Rs 26.

The ice cream variants include — mango bar, strawberry, grape duet, two-in-one ice cream. Each would be sold at Rs 20.

AAVIN has registered monthly sales of Rs 3.25 crore which is 23.64 per cent higher than it was sold last year.

AAVIN Managing Director C Kamaraj, Joint Managing Director R Seethalakshmi and senior government officials participated in the function, the release added.

## Mandya to get mega dairy

<http://www.thehindu.com/todays-paper/tp-national/tp-karnataka/mandya-to-get-mega-dairy/article19634145.ece>

MANDYA, SEPTEMBER 07, 2017 00:00 IST

**A** fully automated and sophisticated mega dairy, with a processing capacity of 12 lakh litres a day, will come up in the district at a cost of Rs. 227.47 crore.

The tender process for civil works has been completed. Chief Minister Siddaramaiah is expected to lay the foundation stone for the project on Thursday at Mandya Milk Manufacturers' Union Ltd. (MANMUL) in Gejjalagere near Maddur.

The milk union has sought financial assistance of Rs. 100 crore from the National Dairy Development Board (NDDB) for the project. It will contribute the remaining amount from its infrastructure fund. According to officials, in case the union doesn't receive NDDB support, it will proceed by applying for bank loan.

The district has been procuring 8.67 lakh litres of milk a day. The production in Mandya is increasing by around 10% every year, and the current milk processing capacity is 4.5 lakh litres a day.

Between 4 and 5 lakh litres of milk goes for conversion (to manufacture milk powder) and production of milk products. Suresh Babu,

managing director, MANMUL, said the project aims to enhance the union's processing level.

Construction of a mega dairy will explore the potential of Mandya in dairy farming and improve the financial stability of farmers. It will help the union improve production of its products and expand its marketing network, said M. Rajashekara Murthy, manager (dairy), MANMUL. He told The Hindu that MANMUL plans to complete the work in 15 months.

The proposed project is expected to be energy-efficient, require limited manpower, and minimise the role of middlemen. It will help the union in getting sophisticated chilling plants and other advanced infrastructure for preserving, processing and packaging.

### Other products

The union has plans to start and improve production of milk, ultra-high temperature processed milk, paneer, curd, skimmed milk powder, and other items.

MANMUL has established 1,174 milk producers' cooperative societies across the district to collect milk. There are 96,900 milk producers registered as members with these societies.

## Dairy foods brand Ananda Group announces its first TV campaign

The TV campaign has been conceptualised by Singapore-based advertising and marketing agency, Bates

September 06, 2017, 15:00 IST

<http://brandequity.economictimes.indiatimes.com/news/advertising/dairy-foods-brand-ananda-groups-first-tv-campaign-is-here/60390790>

**A**nanda Group, dairy foods brand, launched its first television campaign on the lines of its brand proposition: “Anand Karo!”. The TV campaign conceptualised by Singapore based, advertising and marketing agency, Bates CHI & Partners, showcases the diverse products of Ananda through a heart-warming family story, which will be closely followed by extensive 360 degree communication across electronic, print, radio, outdoor and digital across North India.

The campaign focusses on an elderly relative visiting the house, a role played by veteran actor Sudhir Pandey, praising the flavors of farm fresh dairy products without knowing the fact that the food products being served are of ‘Ananda’. When the products are unveiled at the end, the ad campaign shows happy and smiling faces, cherishing delightful dishes prepared with ‘Ananda’ products.

On the launch announcement of the TV Campaign, R. S. Dixit, chairman, Ananda Group, said, “at Ananda, our first priority is always health and goodness, and we aim to put that very goodness straight from “farm to fork”, and on the tables of families everywhere. This

campaign focuses on that promise and shows how, through our products, we are bringing smiles and joy into every household, bringing our brand proposition ‘Anand Karo!’ to life.”

The man who conceptualised this campaign, V. S. Srikanth, CEO, Bates CHI & Partners, opined, “when the makers of a product truly believe in the product, it makes our job a lot easier, and Ananda truly has great products that we hope to introduce to more people through this campaign. We were propelled by Mr. Dixit and his team, who had a clear vision on how they wanted to position the brand in an extremely commoditised market. ‘Anand Karo!’ helped us create a fresh story backed by real insight, brought alive in an interesting and effective manner.”

The campaign will be closely followed by communication that will cover all of Ananda’s products and product innovations and convey Ananda’s promise of health, goodness and quality.

A radio jingle, “Ananda Anand Karo!”, sung by Kailash Kher, has been on air preceding the campaign and sets the tone for the brand.

## Indian dairies building captive power plants to meet new demand

By Ashish Kulshrestha, ET Bureau |

Updated: Sep 06, 2017, 12.33 PM IST

HYDERABAD:

Indian dairies are increasingly setting up captive power plants to meet the growing power requirements propelled by improved focus on value-added products, where the power consumption levels went up multi-fold from the time of mere liquid milk production through chilling units.

Attractively lower production costs of renewable energy thanks to falling prices of solar panels, coupled with erratic power supply in many states, were being cited as key reasons for dairy firms tapping the renewable energy sources, helping them significantly reduce power costs and improve profit margins.

While Hatsun AgroBSE -0.81 % and Heritage Foods are among those who had already set up captive power plants, others like Prabhat Dairy are now looking at setting up renewable energy units.

"The demand for power in the dairy industry has grown at a compounded growth of over 20% in the last couple of years, propelled by 15-17% increase in milk volumes and driven by higher manufacturing of value-added products which requires sophisticated equipment and constant temperature control," said Shailesh Kumar, senior analyst, Sunidhi Securities.

Nara Brahmani, executive director at Heritage Foods, which was founded by Andhra Pradesh chief minister N Chandrababu Naidu, said, "Around 55% of our processing facilities are run on renewable energy based captive power plants which we plan to increase up to 70-80% by 2022. This focus is mainly due to the reducing cost of setting up solar and wind power units coupled with rising per unit power cost from conventional sources."

According to solar and wind power producer Mytrah, wind and solar energy prices have reduced by 42% and 69%, respectively, in the last five years. In the same period, conventional energy prices have decreased by only 13%.

Heritage Foods has so far invested nearly Rs 50 crore in setting up 8.2 MW of solar and wind power plants and is setting up another 2.1 MW wind power plant at an investment of about Rs 14 crore, which will be operational in the next couple of months. Similarly, Hatsun Agro, early this year, commissioned 12 wind power plants of 2 MW each and a 550 KW solar plant that will meet nearly 75% of its power requirement at an investment of Rs 180 crore.

Heritage's Brahmani said setting up of captive renewable power plants has helped save over 25% on power costs. The company now plans to take this up to 40% in over the next five years.

The saving on power cost is expected to help dairies improve their financials.

"Section 32 of the Income Tax Act, 1961, allows for up to 80% depreciation in the year of commission itself in renewable energy power plants, which helps in writing off 80% of the investment. This leads to lower tax outgo and, hence, improves cash flow for the company," said Kumar of Sunidhi Securities.

D Sunil Reddy, managing director at private equity TPG Growth-backed Dodla Dairy, said, "It (captive renewable energy plant) improves EBITDA (earnings before interest, tax, depreciation and amortisation) by 0.5-1%, and the power cost is almost negligible after a couple

of years."

While Hatsun saw an improvement in profit before tax by 0.9%, Heritage posted up to 2.5% growth in EBITDA, thanks to captive renewable energy projects.

The government till last year had allowed exemptions under the Income Tax Act for

income generated through captive power plants. RG Chandramogan, chairman of Hatsun Agro, said, "Any income arising out of the captive power plants, when in surplus, in the first 10 years of its commissioning, used to get tax exemption under 80A and, hence, it was an attractive proposition for dairies. However, this benefit was discontinued this year and would only be applicable for units set up before March 31, 2017."

## Butter prices rise 3.8% at Global Dairy Trade

By [Patrick Donohoe](#) on 05 September 2017

<http://www.farmersjournal.ie/butter-prices-rise-3-8-at-global-dairy-trade-306292>

Overall prices at the Global Dairy Trade (GDT) auction in New Zealand rose marginally at Tuesday's auction.

Butter prices increased by 3.8% \$5,954/t at the GDT with the overall price index up by 0.3% to \$3,323.

Cheddar prices were up by 2.5% to \$4,118/t, while whole milk powder prices dropped 1.6% to \$3,100/t and skim powder prices fell by 1.2% to \$1,944/t.

GDT prices

Butter demand

ICMSA's dairy chair Gerald Quain has again drawn attention to what he called "the hugely concerning gap" that has opened up between Irish dairy prices and those of our mainland EU counterparts.

### Products





Quain said that his association shares the analysis of other experts within the sector in predicting a continued strengthening of dairy markets through the remainder of this year with a further milk price expected for August supplies.

"The widespread sector optimism is based on market data showing butter shows spot prices continuing to reach record highs in terms of European and Dutch quotes in the last month. Dutch quotations are returning butter at €6,800/t compared with €3,500/t 12 months previous, a rise of over 94%," he said.

## Zomato has cut losses; gears up for fight with rivals

Needs new funding without much delay; its rivals have overtaken it on this account

[Karan Choudhury](#) | New Delhi Last Updated at September 6, 2017 01:21 IST

[http://www.business-standard.com/article/companies/zomato-has-cut-losses-gears-up-for-fight-with-rivals-117090501027\\_1.html](http://www.business-standard.com/article/companies/zomato-has-cut-losses-gears-up-for-fight-with-rivals-117090501027_1.html)

**J**ust around a year and half earlier, Zomato, the food ordering and restaurant discovery platform, was vulnerable. In the foodtech meltdown that saw at least two dozen companies being shut, the Gurugram-based entity faced its own challenges. The business was floundering, it got backlash from users for advertising on pornography sites and the losses were mounting.

It was timely advice and guidance from Sanjeev Bikchandani, founder and executive vice-chairman of Info Edge, the main investor in Zomato, which helped in keeping the company afloat.

Amid the turmoil, Zomato founders Deepinder Goyal and Pankaj Chaddah reached for advice to Bikchandani and Hitesh Oberoi, Info Edge's managing director and chief executive, whose online portfolio includes Naukri.com and 99acres.

Oberoi says Bikchandani and he have been only good sounding boards. "To be honest, we have little to do with the companies (we invest in). They have managed it quite well. During the

bloodbath, we advised them to focus on customers, build intellectual property -- our advice to all our companies. We are always available as a sounding board, I am sure they talk to Sanjeev but the founders are the ones who run the show," says Oberoi.

The focus on business has helped Zomato, founded in 2008. It has been able to cut losses by 34 per cent, to Rs 389 crore in 2016-17 from Rs 590 crore the previous year, according to the annual report of its largest shareholder, Info Edge. Its revenue also saw a spike of 81 per cent to Rs 333 crore, from Rs 184 crore a year before, the company said.

It has to do more. While on track to a turnaround, Zomato has struggled to raise fresh funds, while rivals Swiggy and Foodpanda have been able to get multi-million dollar cheques from global investors. Sources in the company said valuation has been an issue. According to sources, the company is finding it hard to get a valuation of a billion dollars or more.

It has so far held talks with major investors such as Baidu, Tiger Global and now Alibaba's fintech



arm, Alipay. The company started talks with Baidu in January last year, in hopes of raising \$200 million. This coincided with the time when the company broke even in six markets, including India, UAE, Lebanon and Qatar.

"When they were planning to raise funds in 2016, the timing was bad and no one was ready to give a foodtech company, even the largest one, a billion dollar valuation. Now, though, interest is back, with Swiggy and Foodpanda managing to raise funds. However, it is still not enough to give the company a billion dollar valuation," said a source close to the company.

Zomato is reportedly raising \$200 mn, at a valuation of around \$900 mn. In May, rival Swiggy raised \$80 mn from investors led by South African internet entity Naspers. The same month, Foodpanda raised \$431.5 mn from Naspers for its global operations, which includes India. Zomato needs new funds to capitalise itself for competing with these two, in addition to UberEATS which is aggressive on India.

"Zomato has been doing well but needs the money for the next level of expansion. Foodpanda, after being on the block in 2015, has not only managed to revive but to raise more than \$450 mn, which might be all the money it needs for expansion and profitability. Zomato needs to up its game," said a source. Hopefully, if it closes the funds from Alibaba, it can.

#### AN UPHILL CLIMB

According to sources, valuation was an issue due to which Zomato failed to raise funds till now

Zomato has been able to cut losses by 34%, to Rs 389 cr in 2016-17 from Rs 590 cr the in previous year

Its revenue also saw a spike of 81% to Rs 333 cr, from Rs 184 cr a year before

Its rivals Swiggy and Foodpanda have been able to get multi-million dollar cheques from global investors

## Gujarat, GCMMF, dairies jointly to provide nutritive foods to anganwadies children and women

[Bharat Yagnik | TNN | Sep 6, 2017, 20:47 IST](http://timesofindia.indiatimes.com/city/ahmedabad/gujarat-gcmmf-dairies-jointly-to-provide-nutritive-foods-to-anganwadies-children-and-women/articleshow/60395940.cms?utm_source=whatsapp&utm_medium=social&utm_campaign=TOIMobile)

[http://timesofindia.indiatimes.com/city/ahmedabad/gujarat-gcmmf-dairies-jointly-to-provide-nutritive-foods-to-anganwadies-children-and-women/articleshow/60395940.cms?utm\\_source=whatsapp&utm\\_medium=social&utm\\_campaign=TOIMobile](http://timesofindia.indiatimes.com/city/ahmedabad/gujarat-gcmmf-dairies-jointly-to-provide-nutritive-foods-to-anganwadies-children-and-women/articleshow/60395940.cms?utm_source=whatsapp&utm_medium=social&utm_campaign=TOIMobile)

AHMEDABAD:

**I**n the present of Chief Minister Mr. Vijaybhai Rupani in Gandhinagar, the Women & Child Welfare Department of the Gujarat Government, Gujarat Milk Marketing Federation and three leading dairies have signed tripartite MOU to save the children of anganwadi from malnutrition.

According to the MOU, under the 'Take Home Ration' district dairies in cooperation with the

milk marketing federation will provide nutritive foods to more than 42-lakh children of 53029 anaganwadies, pregnant-mothers, foster mothers and young girls.

It should be noted that under the Take Home Ration, through the GCOMM, district milk producing cooperative sangh is preparing devibhog (nutritive foods) for the infants (aged between six months and five years), pregnant-

mothers, foster mothers and young girls. Under the scheme, each child gets 125 gms of Balbhog every day and pregnant-mothers, foster-mothers, and young girls get daily devibhog of 145 gms to provide necessary, sufficient calories and proteins to the body.

Besides this, the GCMMF has prepared a recipe book to teach the beneficiaries that what kind of

food items can be prepared from the Take Home Ration.

Others, who remained present on the occasion, included women and child welfare state minister Dr. Nirmalaben Waghwani, Chief Secretary Dr. J.N.Singh, chairman of the milk marketing federation and MDs of Banas, Sumul and Amul dairies and other senior officials.

## NDDB launches milk fortification project

<http://indiatoday.intoday.in/story/nddb-launches-milk-fortification-project/1/1041495.html>

September 5, 2017 | UPDATED 20:10 IST

Mumbai,

**T**he National Dairy Development Board (NDDB) today launched a pilot milk fortification project in collaboration with the World Bank and Tata Trusts.

"Vitamin A and D deficiencies are widely prevalent in India. Fortification of appropriate foods with vitamin A and D is a viable strategy to tackle micro-nutrient malnutrition," NDDB chairman Dilip Rath said while launching a pilot milk fortification project at Anand in Gujarat today.

The World Bank, Tata Trusts and NDDB are collaborating to implement this pilot milk fortification project. The Tata Trusts will provide fortificants (vitamins) free of cost for first six months and at 50 per cent cost for next six months to the milk unions and milk producer companies participating in this pilot initiative, a statement issued here said.

Since milk is consumed by majority, fortification of milk with vitamin A and D is an excellent way of addressing dietary deficiencies, Rath said.

This pilot initiative is financed by the South Asia Food and Nutrition Security Initiative (SAFANSI), administered by the World Bank. SAFANSI seeks to address chronic malnutrition by fostering cross cutting actions to achieve measurable improvements in food and nutrition security in the countries of the South Asia region.

The NDDB will develop protocols for milk fortification, train participating milk unions and producer companies to fortify milk, build human resources to provide support to these institutions for fortified milk production /associated quality control and conduct dissemination workshops to share the outcomes.

The Board also organised milk fortification awareness workshop today. MDs of federations, CEOs of milk unions/ producers companies, officers of the World Bank, Tata Trusts, FSSAI and NDDB, participated in the workshop. It provided an opportunity to representatives from over 70 institutions for project briefing, open discussions and experience sharing on milk fortification.

## Health/Awareness

### Cabinet approves plan to develop dairy sector

Published: September 12, 2017 7:21 PM IST

By [IANS Feeds](#)

<http://www.india.com/news/agencies/cabinet-approves-plan-to-develop-dairy-sector-2466652/>

**T**he Cabinet Committee on Economic Affairs, chaired by Prime Minister Narendra Modi, on Tuesday approved a Rs 10,881 crore fund, for the period 2017-18 to 2028-29, to develop the country's dairy sector, benefitting 95 lakh farmers and generating nearly 2.5 lakh jobs.

The Dairy Processing & Infrastructure Development Fund (DIDF) will focus on building an efficient milk procurement system by setting up of chilling infrastructure and installation of electronic milk adulteration testing equipment and creation, modernization, expansion of processing infrastructure and manufacturing facilities for value added products for the milk unions and producers, said a cabinet communique.

“Out of Rs 10,881 crore of financial outlay for project components of DIDF, Rs 8,004 crore shall be loan from NABARD to National Dairy Development Board (NDDDB) and National Dairy Development Cooperation (NCDC), Rs 2,001 crore shall be end borrowers contribution,” it said.

In addition, Rs 12 crore would be contributed by the NDDDB and the NCDC while Rs 864 crore would come from the Dairy Department towards interest subvention.

Benefiting 95 lakh farmers in about 50,000 villages, the project is set to generate 40,000 direct and two lakh indirect employment opportunities for skilled, semi-skilled and unskilled manpower, the statement said.

“Direct employment opportunities for about 40,000 people will be created under the scheme through project activities like expansion & modernisation of existing milk processing facilities, setting up of new processing plants, establishment of manufacturing facilities for value added products and setting up of Bulk Milk Coolers (BMCs) at village level,” it added.

The benefits also include creating additional daily milk processing capacity of 126 lakh litres, daily milk drying capacity of 210 tonnes, daily chilling capacity of 140 lakh litres, setting up of 28,000 BMCs along with electronic milk adulteration testing equipment and daily value added products manufacturing capacity of 59.78 lakh litre of milk equivalent.

## Govt approves Rs 10,881 crore fund to give a boost to dairy sector

Vishwa Mohan | TNN | Sep 12, 2017, 18:33 IST

<http://timesofindia.indiatimes.com/india/govt-approves-rs-10881-crore-fund-to-give-a-boost-to-dairy-sector/articleshow/60480746.cms>

**T**he government on Tuesday approved Rs 10,881 crore fund to give a boost to the country's dairy sector. The fund will be spent on creating necessary infrastructure and supporting dairy farmers over a period of 12 years during 2017-29.

Projects under the fund - called Dairy Processing & Infrastructure Development Fund (DIDF) - will focus on building an efficient milk procurement system by setting up of chilling infrastructure & installation of electronic milk adulteration testing equipment, creation/modernization/expansion of processing infrastructure and manufacturing facilities for value added products for milk unions and milk producer companies.

"With this investment, 95 lakh farmers in about 50,000 villages will be benefited", said the government through an official statement after the Union cabinet, chaired by Prime Minister Narendra Modi, approved the DIDF.

The project will be implemented by the National Dairy Development Board (NDDB) and National Dairy Development Cooperation (NCDC) directly

through end borrowers such as Milk Unions, State Dairy Federations, Multi-state Milk Cooperatives, Milk Producer Companies and NDDB subsidiaries.

"The implementation of DIDF scheme will generate direct and indirect employment opportunities for skilled, semi-skilled and unskilled manpower. Direct employment opportunities for about 40,000 people will be created under the scheme through project activities", said the statement.

The project activities under the scheme will include setting up of 28,000 Bulk Milk Coolers (BMCs) at village level. Under the scheme, additional milk processing capacity of 126 lakh litre per day and milk chilling capacity of 140 lakh litre per day will also be created.

Initially, 39 profit making milk unions of 12 states will get assistance under the scheme. But, other milk cooperatives, once become eligible on the basis of their net worth and profit levels, can also apply for loan under the DIDF in subsequent years.

## 'Overcrowded' dairy farm struggling to sell milk

Manish Anand, one of the board members, said, "There are no proper sheds to tie the animals here, they are served food in an extremely unhygienic space. There is no compound wall here, which makes it difficult to keep the animals within the farm limits."

Written by ANJALI MARAR | Pune | Published: September 12, 2017 8:22 am

**T**HE ANIMAL dairy farm in Gawaliwada area of Khadki houses nearly 800 cows and buffaloes, which is almost five times more than its actual capacity.

The three-decade-old farm is entirely run by civilians and operated under the Khadki Cantonment Board (KCB). However, poor hygienic conditions have led to a drastic dip in takers for the milk reared from the animals at the shelter.

A review meeting was recently held in the matter, following which the board has sought a report from the officials concerned.

Talking to The Indian Express, KCB CEO Amol Jagtap said, "A committee has been entrusted with visiting the farm and keeping a check on the animals. Depending on the findings, we will take required steps."

According to KCB members, one of the main reasons for the "dismal" situation of the farm was "years of negligence".

Most people depended on milk from military farms and, of late, have been going for packaged milk.

At present, every owner whose animal is being reared at this farm has to pay Rs 5-10 per month, said a member.

Manish Anand, one of the board members, said, "There are no proper sheds to tie the animals here, they are served food in an extremely unhygienic space. There is no compound wall here, which makes it difficult to keep the animals within the farm limits."

He added that there have been instances in the past when animals have attacked people and entered the homes of locals.

Another member added that the government, during 2008-2014, had sanctioned a sum of Rs 25 lakh for renovation and upgradation of the farm, however, nothing translated on ground level.

Anand said, "The building being an old one, needs urgent repair works. If there are proper sheds provided, there can be better utilization of available space, which can then accommodate animals in a proper manner."

Asked about the repair work the board was likely to focus on if the number of animals at the shelter increased, Jagtap said, "We will take action against the owners and rehabilitate them. Repair work of sheds is the only feasible option."

A board member added that if the farm was run in a systematic manner, the board can improve its revenue along with providing better living conditions for these animals, the board members suggested.

## Silvopasture to support dairy farmers

By Express News Service | Published: 12th September 2017 02:56 AM |

Last Updated: 12th September 2017 07:08 AM | A+A A- |

<http://www.newindianexpress.com/states/odisha/2017/sep/12/silvopasture-to-support-dairy-farmers-1655814.html>

**T**he district administration has planned to undertake silvopasture project in nine villages in Kuchinda sub-division under MGNREGS to provide support to dairy farmers.

Silvopasture is a practice of combining forestry and harvesting of green fodder for domestic animals. The silvopasture also helps in soil conservation. It will be undertaken over 26 hectares (ha) of land in nine villages, including Kusuli, Tiklipada and Bandhbahal in Jamankira block, Pandrikata, Kusumi and Ganmunda in Kuchinda besides Haripada, Jagdatiria and Jarabaga in Bamra block under Kuchinda sub-

division of the district. The total estimated cost for establishment of silvopasture units is about `69 lakh.

Sambalpur Fodder Development Officer Anup Badpanda said the silvopasture will be undertaken in village forests, Government waste land and pasture land. Demarcation of land has already been completed and wild growths cleared from the land. At present, land levelling and preparation work are going on, he added.

## New method can keep vitamins intact in fat-free milk

DR. SHIKHA T MALIK

<http://www.thehindubusinessline.com/news/science/new-method-can-keep-vitamins-intact-in-fatfree-milk/article9855069.ece>

NEW DELHI, SEP 11:

**L**ow-fat and fat-free food products are gaining popularity among health conscious people. But regular consumption of such food items may result in deficiencies of certain vital nutrients like vitamins and essential fatty acids. Being 'fat soluble', such vitamins get removed along with fat when food products are made fat-free.

Scientists are working on ways to keep nutritional content of food products intact even when they are made fat-free or low-fat. Researchers at the National Dairy Research Institute (NDRI), Karnal, have developed a method to enhance nutritional content of fat-free milk by preparing Vitamin A and milk protein complexes.

Vitamin-A is one of the four fat-soluble essential vitamins, the others being D, E and K. The

deficiency of Vitamin-A, which is the leading cause of preventable childhood blindness is a major public health problem in India.

Researchers modified casein – a major protein present in milk- with a chemical called succinic anhydride (SA) and prepared succinylated casein-Vit A complexes. They evaluated different combinations and found sodium caseinate-Vit A and succinylated sodium caseinate-Vit A complexes had high Vitamin-A binding ability and solubility. Hence these complexes may be used to retain essential micronutrients in milk.

It has been suggested that casein owing to its unique properties can be easily used as a delivery vehicle for Vitamin-A in milk. Since SA is classified as 'generally recognized as safe' substance by the United States Food and Drug Administration (USFDA), modifications of casein



using SA is considered safe for human consumption.

The new method developed by NDRI team could be used in future for fortification of milk, which is now permitted by Indian regulatory agencies. “The Food Safety and Standards Authority of India (FSSAI) has already approved addition of vitamins A and D to milk. These vitamins are being used for fortifying milk by Mother Dairy,

Amul and many state cooperatives at the moment”, pointed out Dr. Sumit Arora, who led the research team.

The team led by Dr. Sumit Arora included Chitra Gupta, M.A. Syama and Apurva Sharma at the Dairy Chemistry Division, NDRI. This work was published in journal Food Chemistry and was funded by Department of Biotechnology.

## Remembering Kurien on 5th anniversary

Posted in [Dairy](#) on September 09, 2017 by [parasnath](#)

<http://www.indiancooperative.com/dairy/remembering-kurien-on-5th-anniversary/>



Several people took to social media to greeting the man who made India from a milk deficient country into the largest producer of milk in the world. An icon of India’s cooperative movement and the dairy industry Dr Verghese Kurien had passed away this very day on 9 September 2012.

Verghese Kurien was born on 26 November 1921 at Kozhikode in Kerala, India and died on 9 September 2012 at Nadiad in Gujarat, India.

Known as Father of while revolution and the Milk Man of India, Kurien though did not himself touch milk ever in his life but ensured its supply among the needy millions in the country. GCMMF paid tributes to the legend by its topical saying “you are as much in our dreams as in promises”.

Verghese Kurien helped establish the Amul cooperative which has become India’s largest food brand. He found the National Dairy Development Board (NDDB) in the year 1965.

He received a number of accolades and awards including Ramon Magsaysay Award, 1963 and Padma Vibhushan in 1999. The fact that he was not awarded Bharat Ratna is resented till date by many.

Several people including Chattisgarh Chief Minister Ram Singh remembered him through social media. R S Sodhi, Managing Director of dairy cooperative major Amul, will deliver the Kurien Memorial Lecture at Michigan State University in the US on September 13

## What Did Demonetisation do to India's Beleaguered Rural Economy

Even today, cash isn't easy to come by in many rural branches; hundreds of ATMs have fallen silent in the countryside, and digitisation is now a synonym for queuing up.

Updated: September 10, 2017, 1:18 PM IST

<http://www.news18.com/news/india/what-did-demonetisation-do-to-indias-beleaguered-rural-economy-1514251.html>

The joke doing the rounds in the dusty countryside these days is 'Queue up if you want relief'. At SETU outlets, the government-recognized agents in rural Maharashtra, all that you see these days are queues and queues of beleaguered farmers, turned up, ironically, to file digital applications.

Want crop loan? Line up outside banks. Loan waiver: Queue up to fill and submit an application. Want to build a toilet; need subsidy? There's a queue. Stand up India has assumed a whole new dimension here. There is no guarantee though that standing in a queue might fetch what you so desperately covet.

It began with demonetisation last November when rural India lined up to exchange old notes for new ones like the urban India did, but the pain lasted several months. Even today, cash isn't easy to come by in many rural branches; hundreds of ATMs have fallen silent in the countryside, and digitisation is now a synonym for queuing up. In fact until November 8, 2016, standing up in a queue was not a means of life as it has today become in a changed India. Sure, among the many intended objectives of the note-ban the Union Finance Minister Arun Jaitley told us we do not get it, making a farmer stand up in a queue may not have been intentional. It came as a by-product; small things happen in a big country. The FM wants us to stay focused on the big picture, even if the reality is scarier than the myth around it.

The clamour on the ground is getting shriller, even if the noise is inaudible in Delhi.

What came not as a side dish in 2016 but main course was the sudden jolt rural India received

after a better monsoon in most parts of the country after consecutive years of drought and disrupted the rural economy severely; its disruptions are yet to abate, ask a dairy or a poultry or a sustenance farmer.

That the countryside has been in the grip of a recession in last two decades of India's much trumpeted growth story is beyond doubt. That's the context really to understand why demonetisation was a pain for rural peasantry more than a gain, though their support to the PM's political move is another point. As this writer found, many poor people did believe that someone's stashed black cash would tumble out of the closet and the government would then spend it on their welfare. They believed in the mythology.

The PM's 'surgical strike on black money', as it was dubbed then, actually torpedoed the peasantry and rural masses in more ways than one post-November 2016, as cash dried, informal economy tanked, and crop prices plunged overnight at a time when fresh harvests had begun to arrive in the markets.

Rural employment fell and there's enough data today to show that the GDP decline had had a cascading effect on the countryside.

Take for instance one example – and there really were millions across the country: The rains in 2016 had been good and timely, climatic factors perfect and his yields bumper, so 28-year-old Sandeep Thavkar, a farmer in Virkhandi village about 60 km from Nagpur, thought his tomatoes would fetch him a windfall.

He was pleased with himself that he had acted

smartly by not planting traditional crops like soybean or cotton on his entire stretch but diversified into planting tomatoes on a third of it.

Demonetisation precipitated the price crash on the heels of a bumper tomato crop – he found that the prices had crashed beyond comprehension just when the vegetable flushed the local markets.

In the last week of November, days after the demonetisation decision was unveiled dramatically by the Prime Minister, Sandeep came home one afternoon, crestfallen that 25 crates, each with 25 kg of freshly harvested tomatoes, fetched Rs 30 a crate – or just over a rupee per kilogram. (In the last two months, tomato prices in retail markets hovered between Rs 50 and Rs 100 a kg due to shortages.)

He asked his cousin Sachin to lend him his tractor for an hour. For the following few hours, Sandeep flattened his standing crop, drove the tractor over it in despair – the crop that he, his wife, his sister and an aunt had toiled for round the clock for the previous four months, planting, weeding, and watering it.

Sandeep would have continued to pluck tomatoes until March from the creepers, every so often.

A sudden plunge in prices was the last thing he or thousands of farmers across India expected in Diwali; for a majority of the states, save the southern states, good monsoon and fairly better yields popped up the prospects of good returns. They had no clue that Modi, their beloved PM, had a different idea. For days, the APMC-run markets remained closed under protests and due to a sudden paucity of cash.

From north to the south and west to the east and the entire north-east, demonetisation played out differently for different crops and regions, with one common link: it wrecked the informal economy during the Kharif harvest and ahead of the preparations for the ensuing Rabi crop. Such

were the losses that the pain has spilled over to the 2017 Kharif, and farmers stand in a financial mess in many states.

In a state like Tamil Nadu, where both the south west and north east monsoon failed in 2016, the note ban came in as a quake that would bury the remains of the past too: In the Cauvery Delta region, for instance, farmers could not withdraw their own money to buy seeds and inputs for what they call the ‘Kuruvai’ crop, their main season for which planting is done in the month of October and November.

The region which usually receives rainfall from a receding monsoon around the same period went dry and suffered huge losses; peasants clamoured for both, water and money; and neither was available in the thick of time. That was the reason why Tamil Nadu recorded an unprecedented spurt in suicides and shock deaths of farmers in December 2016 and January 2017 and sparked state-wide protests.

There was no employment on farms in the following few months; and rural migrants found that the cash crunch had devastated informal job sector in the cities.

It’s difficult to quantify the real losses rural India, both the peasant classes and the landless, suffered in the wake of demonetisation, but while traveling in Maharashtra, Chhattisgarh and neighbouring Madhya Pradesh in December and January I could see the rural economy in a disarray, yet a people’s support to the decision as a sharp contrast to the pains they were subjected to.

It was a support to a decision they thought was in the national interest and believed the losses they suffered were worth the gains.

“Vegetable prices go down around this time of the year (November-December) because of seasonality but perhaps cash shortage has been an additional factor affecting such price decrease,” wrote Dr Ashok Kumar Lahiri, former

Chief Economic Adviser for Department of Economic Affairs of Union Ministry of Finance, in a working paper series published in November 2016 on 'Demonetisation, the cash shortage and the black money, published by the National Institute of Public Finance and Policy (NIPFP).

The Central Statistics Office's (CSO) just-released GDP data for April-June 2017 shows that the annual growth in gross value added from agriculture during the last quarter, particularly in June when India saw a sharp rise in farmers' protests, was only 2.3 per cent in real terms (i.e. at constant prices), as against 5.2 per cent for January-March and 6.9 per cent for October-December, Harish Damodaran of the Indian Express wrote on September 2, 2017. "But what's more significant," he wrote, "is the growth in nominal terms or at current prices unadjusted for inflation. That, at 0.3 per cent, was even lower. Simply put, it means that even though farm output for the last quarter was 2.3 per cent higher year-on-year, the fall in prices by 2 per cent resulted in the value of agricultural production rising just 0.3 per cent."

The CSO does not say it but post demonetisation, not only did the prices across the farm commodities crash, procurement became a gigantic task, both for the state governments and private traders.

A large quantity of 'Tur' (Red Gram) is still lying unsold with many farmers across central India since the state governments grappled with bumper harvests of the crop last season.

The CSO data confirms that agriculture entered deflation territory in April, coinciding with the harvesting and marketing of rabi crops, Damodaran wrote, and its effects truly played out in June.

Market movement showed a clear demarcation in pre and post demonetisation prices.

For instance, Bandu Ghormade, a progressive vegetable grower in Chicholi village about 50 km from Nagpur, sold his tomatoes in Nagpur's sprawling Agriculture Produce Market Committee market yard at Rs 8 a kg before demonetisation. On November 9, 2016, the day after demo, the prices fell to Re 1 a kg.

In June, that pent up anger finally spilled over on the streets across the country, with the nation's polity completely disconnected with the agrarian realities. The rural economy, infrastructure, and life has been under stress for more than two decades, particularly in those regions where farming is the sole mainstay and where farming is dependent only on the monsoon, with no protective irrigation facilities.

Fact remains that despite investments and mechanization, farm sector has shown no significant change in output growth – it has been steady at around 2.5 per cent per annum over the last few decades falling consistently short of the four per cent per annum targeted in successive Five Year Plans. This growth has regional dimensions; some regions like Vidarbha or Bundelkhand that are rain-dependent for farming have recorded negative growth in agriculture for almost two decades, many studies indicate.

Post-demonetisation unexpected losses due to price crash led to despair among peasants; this kharif, crop loan disbursements are way off the mark in many states.

Last season's loss coupled with the political demands for a total loan waiver has led to abysmal crop loan repayments. Banks are grappling with crop loan NPAs and fresh loan disbursement. And there's a queue now for everything – from getting fresh loans to applying for an old loan waiver.

## Cow's milk harmful for toddlers below one year

IANS | Sep 10, 2017, 12:23 IST

<http://timesofindia.indiatimes.com/home/science/cows-milk-harmful-for-toddlers-below-one-year/articleshow/60447379.cms>

**F**eeding cow's [milk](#) to toddlers below the age of one year is a growing factor behind allergic diseases, including in the respiratory and digestive system, as they cannot tolerate protein in the milk, experts said on Sunday.

Stating that infants who do not get breast milk need an alternate form of nutrition to maintain their health, the child experts said if cow's milk is fed at such an initial age then the low concentration of iron and its consumption during infancy is linked to anemia.

"Though cow's milk is associated to our culture for ages, it should not be given to toddlers below one year... It may put a strain on the infant's immature kidney and is also difficult to digest," said Nandan Joshi, Health and Nutrition Science, Danone India.

While older infants can be fed with household complementary food, younger ones need special hydrolysed and amino acid-based formula which do not produce allergy.

As per the National Family Health Survey (NFHS), only 40 per cent of children were introduced timely complementary foods, while only 10 per cent children between six to 23 months received adequate diets.

The infants are given [cow milk](#) in India as awareness is low among the people especially in rural areas.

As per the Rapid Survey on Children (RSOC), 42 per cent of non-breastfed infants below one year

received cow's milk or any other milk.

"Allergic diseases are on the rise worldwide. The incidents are more in developed countries though it is on the rise in India as well. Milk allergy is the most common allergy in children," said Lalit Bharadia, Consultant Paediatric Gastroenterologist at Jaipur's Santokha Durlabhji Memorial Hospital.

"Around 3 per cent of children can't tolerate milk protein in animal milk. Milk allergic infants, who do not get breast milk, need an alternate form of nutrition to maintain their health."

Durlabhji said that while older infants can be fed with household complementary food, younger ones need special hydrolysed and amino acid-based formula which do not produce allergy.

"Such products are easily available in India."

Allergy is a result of one or more cow's milk proteins triggering an adverse reaction by our body's immune system.

The symptoms vary and may affect several organ systems such as skin, digestive or the respiratory tract, possibly resulting in skin rash, eczema, vomiting, diarrhoea, colic, wheezing or excessive crying.

In a study conducted at a tertiary care hospital in India, three out of 10 children with chronic diarrhoea were estimated to be suffering from cow's milk allergy. Globally, the prevalence rate of cow's milk allergy is approximately 3 to 5 per cent.



## Farmers told to use modern technology

THE HANS INDIA | Sep 08, 2017 , 04:27 AM IST

<http://www.thehansindia.com/posts/index/Andhra-Pradesh/2017-09-08/Farmers-told-to-use-modern-technology/325001>

**E**ndowments Minister P Manikyala Rao on Thursday called upon the farmers to utilise modern technology to increase the milk production.

Inaugurating the farmers training and information centre building at the MDO office in Pentapadu along with Narsapuram MP GokarajuGangaraju, he said the building was constructed with the funds of NABARD and RIDF.

The minister said that the government has concentrated on development of crops and dairy units for development of farmers and higher yielding. He said the distribution of fodder seed on nominal rates was under consideration of the government. Sarpanch Surya Kumari, ZPTC member KilapartiVenkatrao and DCCB Director DasariAppanna participated.

## LECTURE TO HONOR MSU ALUMNUS WHO MADE A DIFFERENCE IN INDIA'S MILK INDUSTRY

<http://msutoday.msu.edu/news/2017/lecture-to-honor-msu-alumnus-who-made-a-difference-in-indias-milk-industry/>

Published: Sept. 5, 2017

**R**.S. Sodhi, managing director of dairy company Amul India, will posthumously honor Michigan State University alumnus Verghese Kurien with the Kurien Memorial Lecture at 4 p.m. Sept. 13 in the auditorium of the Kellogg Hotel and Conference Center.

Sodhi's lecture, "India's Milk Revolution: Verghese Kurien and the Story of Amul," will take the audience through a journey of Kurien's life and contributions to rural farmers across India. He played an instrumental role in transforming India from a milk-deficient country to the world's biggest milk producer.

Sodhi will cover Kurien's role in the founding of Amul and its growth into India's largest milk cooperative and food company. Amul is known

not only for the breadth of its products and sales, but also for the scale and reach of its inclusive economics. More than 3.6 million smallholder producers deliver milk for collection at more than 18,000 villages every day.

Sodhi will share his vision for Amul's future and outline the opportunities and challenges in the context of India's growing middle class and the need for economic, environmental and social sustainability. He will also profile the personal attributes and accomplishments of Kurien and the ways they still inspire today.

The event is sponsored by various MSU departments and colleges and is free and open to the public. A networking reception will follow the lecture at 5 p.m.



## Madhya Pradesh launches scheme to help rural youth set up food processing units

Under the Madhya Pradesh govt scheme, rural entrepreneurs can set up a primary processing unit at a cost of up to Rs25 lakh, of which they will receive 40% as a subsidy while the rest will be financed by bank loans

[http://www.livemint.com/Politics/ALKLBmlSh4hJ8KbmY6sfGI/Madhya-Pradesh-launches-scheme-to-help-rural-youth-set-up-fo.html?facet=amp&utm\\_source=googleamp&utm\\_medium=referral&utm\\_campaign=googleamp](http://www.livemint.com/Politics/ALKLBmlSh4hJ8KbmY6sfGI/Madhya-Pradesh-launches-scheme-to-help-rural-youth-set-up-fo.html?facet=amp&utm_source=googleamp&utm_medium=referral&utm_campaign=googleamp)

Last Modified: Tue, Sep 05 2017. 11 15 PM IST

**E**ncouraged by the success of its farm machinery leasing scheme to support entrepreneurship among rural youth, the Madhya Pradesh government has announced another one—this time to help them set up food processing units.

Anyone who is older than 18 years and has cleared secondary board exams can apply for the scheme, under which primary processing units can be set up at a cost of up to Rs25 lakh per unit. Under the scheme, rural entrepreneurs will receive 40% of the investment as a subsidy, while the rest will be financed by bank loans.

The new scheme, approved by the state government's special farm cabinet on Monday, will utilize financial assistance from a central scheme which allows setting up of custom hiring centres for renting farm machinery.

Under the new scheme, rural youth can set up small scale mills to process rice, pulses, millets and dehydration units for onions and garlic. The scheme also allows manufacturing of onion and garlic paste, soya milk and tomato puree, among others.

The government's target is to set up 500 such processing plants within the next three years.

"The idea is to emulate the success of custom hiring centres where rural unemployed youth

have set up centres across the state renting out machinery to small farmers and are earning decent profits," said Rajesh Rajora, agriculture secretary of Madhya Pradesh.

The state government's latest scheme follows another one launched last week wherein farmers will be compensated for distress sales of crops at prices below federal government-announced minimum support prices (MSP). The scheme is planned as a cover against price risks for growers of oilseeds and pulses.

Since June, farmers in several parts of Madhya Pradesh have been protesting against a sharp fall in crop prices from onion and spices to pulses and oilseeds. On 6 June, at least five protesting farmers died in police firing in Mandsaur district.

Anger among farmers, however, is in sharp contrast to the state government's numbers. On Monday, the Madhya Pradesh government said in a statement that the states' agriculture growth rate was over 20% for the fifth year in a row in 2016-17.

According to the state government, value of farm output rose from Rs1,68,427 crore in 2015-16 to Rs2,22,174 crore in 2016-17, or nominal farm incomes rose by Rs53,747 crore during the year.

## WhatsApp to soon launch app for businesses

Facebook is building and testing new tools via a free WhatsApp Business app for small companies and an enterprise solution for bigger companies operating at a large scale with a global base of customers, like airlines, e-commerce sites and banks.

September 06, 2017, 11:56 IST

<http://retail.economictimes.indiatimes.com/news/e-commerce/e-tailing/whatsapp-to-soon-launch-app-for-businesses/60388115>

**F**acebook-owned WhatsApp has announced it would soon be launching features to take businesses onboard and make it easy for them to interact on the messaging platform.

"In the coming months, we'll be testing new features that aim to solve some of these challenges, and make it easier for people to communicate with the businesses they want to reach on WhatsApp," the company said in a statement late on Tuesday.

"Our approach is simple - we want to apply what we've learned helping people connect with each other to helping people connect with businesses that are important to them," it added.

Facebook is building and testing new tools via a

free WhatsApp Business app for small companies and an enterprise solution for bigger companies operating at a large scale with a global base of customers, like airlines, e-commerce sites and banks.

"We want to apply this same approach to bringing businesses onto WhatsApp in ways that create value for people. We're looking forward to making it possible for people to connect with businesses and giving businesses the tools to make that easier to do," said Matt Idema, WhatsApp Chief Operating Officer.

These businesses will be able to use the company's solutions to provide customers with useful notifications like flight times, delivery confirmations and other updates.

## Regulatory/Legal

### FSSAI establishes Smart Consumer app integration to redress complaints

Thursday, 14 September, 2017, 08 : 00 AM [IST]

<http://www.fnbnews.com/Top-News/fssai-establishes-smart-consumer-app-integration-to-redress-complaints-41119>

In an attempt to provide better consumer access, particularly towards quick and satisfactory resolution of grievances, the Food Safety and Standards Authority of India (FSSAI) has established a network integration with the Smart Consumer app for a robust, effective and efficient system of redressing consumer complaints relating to food, apart from providing information about smart buying tips and claim busters.

With the said objective, the country's apex food regulator, the ministry of consumer affairs, food and public distribution and GS1 India [a standard body set up by the ministry of commerce and industry, along with the Bureau of Indian Standards (BIS), the Associated Chambers of Commerce and Industry of India (ASSOCHAM), the Confederation of Indian Industry (CII), the Federation of Indian Chambers of Commerce and Industry (FICCI), the Agricultural and Processed Food Products Export Development Authority (APEDA), the Federation of Indian Exporters' Organisations (FIEO), the Indian Institute of Packaging (IIP), the Indian Merchants' Chamber (IMC) and Spices Board], jointly organised a national conference, whose theme was Enabling Regulatory Compliance and Connecting with Consumers.

The Smart Consumer app was developed in 2016 by the ministry of consumer affairs, food and public distribution in association with GS1 India.

During his keynote session, Pawan Kumar Agarwal, chief executive officer, FSSAI, addressed the need of enhancing the usability

of channels as to provide an effective mechanism for grievance redress.

"We want to make sure that no complaint goes unresolved, and hence, integration with appropriate channels is relevant," he added.

"The integration will enable consumers to get more visibility to FSSAI license numbers/certificates, product recall alerts and customer complaint modules for reporting food quality- and safety-related issues directly to FSSAI through the scanning of barcodes [which use the global trade item number (GTIN)] on consumer products through the Smart Consumer mobile app," Agarwal said.

These new features, through integration with the Smart Consumer app, would greatly benefit consumers in confirming that food products being purchased by them are from FSSAI-registered/licensed manufacturing units.

During the conference, the regulator also sensitised food manufacturing units, retailers and e-commerce platforms/food portals on product recalls and the e-commerce guidelines which need to be complied with from a food safety perspective.

The mobile app connects consumers digitally with manufacturers/suppliers using their customer care contact details for speeding redressal of complaints. It also enables consumers to access all marking/labelling information of products effortlessly. In several instances, it is difficult to read the information printed on the product label.

When a product's barcode is scanned or its barcode number (GTIN) is entered, it displays all product-related information on the Smart

Consumer app, which is powered by DataKart, the national product repository used by a number of food business operators (FBOs).

## Hurdle Technology For Milk Products

| Indian Dairy Products

By [Guest Post](#) | September 14, 2017

<http://discoverfoodtech.com/hurdle-technology-for-milk-products-indian-dairy-products/>

**H**urdle technology is a method of ensuring that pathogens in food products can be eliminated or controlled. This means the food products will be safe for consumption, and their shelf life will be extended. Hurdle technology usually works by combining more than one approach. These approaches can be thought of as "hurdles" the pathogen has to overcome if it is to remain active in the food. The right combination of hurdles can ensure all pathogens are eliminated or rendered harmless in the final product. This article would be throwing light on Hurdle technology for milk products.



### Hurdle Technology For Milk Products

As per the definition of hurdle is factor condition, or processing step that limits or retard / prevent microbial growth or reduces the microbial load but which by itself cannot keep microbiological hazard under control. Where hurdle technology is the combination of selected hurdles which keeps microbiological hazard and other micro organism under control with or without the combination of microbiocidal steps so as to obtain and retain the end product safety, sustainability.

In hurdle technology, hurdles are deliberately combined to improve the microbial stability and the referred to the auto-sterilization of stable, hurdle preserved foods. It has been observed that because of elevated temperature, which flavors and probably triggers microbial growth, vegetative cells, strain every possible repair mechanism to overcome the various hurdles present. Thus, because of such autosterilization, hurdle preserved foods that are microbiologically stable become even safer during storage, especially in ambient temperature.

### Hurdle Technology In Food Preservation

In the dairy industry, use of thermal pasteurization (TP) is the established food technology for commercial processing of milk. However, degradation of valuable nutrients in milk and its sensory characteristics occurs during TP due to substantial heat exposure. Pulsed electric fields (PEF) and microfiltration (MF) both represent emerging food processing technologies allowing gentle milk preservation at lower temperatures and shorter treatment times for similar, or better, microbial inactivation and shelf stability when applied in a hurdle approach compared to Thermal Processing.

### MICROBIOCIDAL HURDLES THAT REDUCE MICROBIOLOGICAL LOAD | Hurdle Technology For Milk Products

**The principles of the most common Hurdles within this category are:**

**Bactofugation:** The removal of microbial cells of high density from milk using high centrifugal forces.

**Competitive microflora:** The reduction of the number of undesirable microorganisms by lowering the pH, consumption of nutrients, and production of bacterial antimicrobial substances (such as nisin, other bacteriocins and hydrogen peroxide). Usually, this Hurdle is applied by choice of starter cultures.

**Microfiltration:** Removal of microbial cells, clumps and somatic cells by recirculation over a microfilter.

**Ripening (ageing):** The holding for such time, at such temperature, and under such conditions as will result in the necessary biochemical and physical changes characterizing the cheese in question. When applied as a Hurdle, the multifactoral, complex system developing in cheese (pH, antagonistic flora, decreased water activity, metabolism of bacteriocins and organic acids) is utilized to influence the microenvironment in and on the food and consequently the composition of the microflora present.

**Thermization:** The application to milk of a heat treatment of a lower intensity than pasteurization that aims at reducing the number of microorganisms. Thermized milk is alkaline phosphatase positive.

**High-pressure treatment:** Application of high hydrostatic pressures (> 3000 Bar) to irreversibly damage the membranes of vegetative cells.

**Ultrasonication:** The application of high intensity ultrasound (18-500 MHz) that cause cycles of compression and expansion as well as cavitation in microbial cells. Implosion of microscopic bubbles generates spots with very high pressures and temperatures able to destroy cells.

**Electromagnetic energy treatment:** Electromagnetic energy results from high voltage electrical fields, which alternate their frequency millions of times per second (< 10<sup>8</sup> MHz). Examples are microwave energy (thermal effect), radio-frequency energy (non-thermal effects) or high electric field pulses (10 – 50 kV/cm, non-thermal effects). The treatment destroys cells by establishing pores in the cell walls due to the build up of electrical charges at the cell membrane.

**Low-intensity irradiation:** The submission of beams of photons/electrons to destroy viable microorganisms.

Today public concern is toward minimal damage to food product with maximum protection of food to microorganism. So hurdle technology is the best way by which we can improve both of this characteristic. In dairy industry we can use this technique and improve quality as well as it is possible to make some value added product by this technique.

## Banks must give loans to youth: MLA

Sep 13, 2017, 07:30 IST

<http://timesofindia.indiatimes.com/city/chandigarh/banks-must-give-loans-to-youth-mla/articleshow/60486173.cms>

**L**ocal Legislator Balbir Singh Sidhu while addressing district level consultative committee meeting of banks held at Vikas Bhawan in Mohali on Tuesday stated that banks should provide loan to youth for self-employment without any delay. This must be done in order to help them in starting their own business.

He said banks should generate awareness about Pradhan Mantri JanDhan Yojna, Rupay Card Jan Suraksha Yojna, Atal Pension Plan, Pradhan Mantri Mudra Yojna, Stand up India Program, Avas Yojna, Education Loan, National Urban Livelihood Mission, Dairy, Self Help Group, RSETI

etc, so that general public could obtain maximum benefit of these [schemes](#).

Addressing the meeting deputy commissioner Gurpreet Kaur Sapra said financial education-cum-awareness camps at village-level should be organized and a report in this regard should be submitted to the office of deputy commissioner. She directed the bank officials should ensure that the beneficiaries under different schemes should use and operate single account so that the requisite subsidy could be provided without any delay and clearance towards bank account could also be ensured timely.

## Bankers urged to promote dairy

KARIMNAGAR, SEPTEMBER 06, 2017 22:40 IST

<http://www.thehindu.com/news/cities/Hyderabad/bankers-urged-to-promote-dairy/article19631760.ece>

**T**he erstwhile Karimnagar district has lots of potential for dairy units with the success of Karimnagar Dairy, NABARD Assistant General Manager (Dairy Development) R. Ravi Babu said calling upon bankers to extend to extend financial assistance to the sector.

Development of dairy units would provide assured regular income to the farming community along with agriculture, he said, speaking at a one-day district level workshop on 'Dairy Entrepreneurship Development Scheme' (DEDS) in the town on Wednesday.

Integrated activity

The NABARD had sanctioned ₹12 crore for the Telangana for grounding of dairy units by

providing subsidy. Under this scheme, the dairy units would be integrated with the agriculture sector by making the farmers to take up fodder cultivation and also vermi-compost and use the same as manure in the fields to increase the farm productivity, he said. Financial assistance would be provided for the purchase milch animals, rearing of heifer calves, vermi-compost with milch animal units, milking machines, milk testers, bulk cooling units of 5,000 litres capacity, processing equipment dairy products transportation, cold storage facilities for milk and milk products, setting up veterinary clinics and dairy parlours, among others.

Subsidy



The NABARD would provide subsidy of 25 % for general category beneficiaries and 33.33 % for SC\ST, he said and added that the last date for applying for the assistance was September 30 and the loans would be sanctioned on first come first serve basis.

Karimnagar District Cooperative Central Bank (DCCB) chief executive officer Satyanarayana Rao said that they were in the forefront in

extending financial assistance to the farmers for dairy units by entering into tripartite agreement with Karimnagar dairy and the farmers. During the last financial year they had advanced ₹32 crore, he said and there was cent per cent repayment. Lead district manager Rajaiah, Director RSETI Dattadri and others were present. Later, all the bankers made a field visit to Karimnagar dairy.

## Survey/Report

### Increasing Awareness about Health Benefits of Dairy food Will Drive Major Growth In Dairy Blends Market 2017-2024

[https://www.einnews.com/pr\\_news/403633808/increasing-awareness-about-health-benefits-of-dairy-food-will-drive-major-growth-in-dairy-blends-market-2017-2024](https://www.einnews.com/pr_news/403633808/increasing-awareness-about-health-benefits-of-dairy-food-will-drive-major-growth-in-dairy-blends-market-2017-2024)

**A**ccording to the research report, the global dairy blends market are expected to be worth US\$4.59 billion and CAGR of 9.0%. By the end of 2024.

PUNE, INDIA, September 13, 2017 /EINPresswire.com/ -- WiseGuyReports announced addition of new report, titled "[Dairy Blends Market](#) (Form - Liquid, Spreadable, and Powder; Application - Infant Formula, Bakery, Beverage, Ice cream, Pharmaceutical Lactose, and Butter and Cheese Blends) - Global Industry Analysis, Size, Share, Growth, Trends and Forecast 2016 – 2024".

Earlier milk was considered as nutritious food because it contains cycloneotrients which contains (protein, fat, lactose) micronutrients and vitamins, which include minerals for the use of minerals. But milk products such as lactose intolerance, cholesterol, certified fat, allergic

symptom, which have recently led to turbulence for Dairy Blends products.

Dairy food has become an integral part of most of the meals. Due to the increasing use of the Dairy food in the past few years various products have been introduced in the global market. Increasing awareness of the growing population and the benefits of dairy products has led to the demand for various types of dairy blends.

According to the research report, the global dairy blends market are expected to be worth US\$4.59 billion and CAGR of 9.0%. By the end of 2024.

It has also been noticed that proper nutrition and a sufficient diet are important for human health and these factors have run a dairy mix market. There is pre-requisite health care for one's health care and protection against infectious diseases. It is observed that the use of dairy

blends combinations provides health benefits, thus improving the child's global nutrition and improving family diet.

Request Sample Report  
@ <https://www.wiseguyreports.com/sample-request/1919087-dairy-blends-market-form-liquid-spreadable-and-powder-application-infant-formula>

The worldwide Dairy blends Market is seeing a steady growth rate due to rising disposable income. Increasing use of food due to rising population and low-fat foods has increased its use. Increasing emphasis on healthy food items that provide excellent nutritious food has increased demand for dairy products. A recent survey found that 61% of the respondents suggest that less effort and helping time reduce are the major factors towards using a convenient substitute product.

From market point of view Dairy Blends is fragmented into powder and liquid, and by application the market has been segmented into infant formula, bakery, beverage, butter and cheese blends, pharmaceutical lactose, ice cream, butter and cheese blends and others which include yogurt, dairy feeds.

The report on Dairy Blends Market analyzes current and future conditions of the global market. Detailed analysis of the market review and market rehabilitation has given its opportunity in detailed qualitative analysis and market observation section.

An analysis of market attractiveness by analyzing geography and market shares by major players in this section of the report also provides a thorough study of the overall competitive situation in the world Dairy Blends market. Including company observation, financial review, production portfolio, business policy and recent developments.

Geographically, the World Dairy blends Market is divided into Europe, North America, Asia Pacific, Latin America and the Middle East and Africa. According to the study, the European Dairy Mendon market is expected to grow because consumers are aware of the need to use the right kind of food for proper nutrition.

The Major players in the global dairy blends market are Kerry group, Cargill Inc., Agropour Ingredients, Fonterra Co-Operative Limited, Agropour Ingredients, FrieslandCampina, Dohler Group, Intermix Australia Pty Limited, Advanced Food Products LLC, Galloway Company Inc., and Cape Food Ingredients.

Finally, Dairy blends have occupied a significant position due to its associated product benefits. It has also been noticed that proper nutrition and a sufficient diet are important for human health and these factors have run a dairy blends market.

Continued...

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## Fermented food like yoghurt good source of nutrients: experts

Published: September 7, 2017 6:47 PM IST

<http://www.india.com/news/agencies/fermented-food-like-yoghurt-good-source-of-nutrients-experts-2456298/>

**F**ermented foods have always held a special place in Indian cuisine culture with curd, in its various forms like 'lassi' and 'chhaachh', being an intrinsic part of people's diets.

Yoghurt, a popular food import from the West, is also evolving as an alternative healthy snack food among Indian consumers.

Food experts suggest that yogurt, which is produced by bacterial fermentation of milk, can be a source of important nutrients, including protein.

"Yogurt is a nutrient-dense food that is good for people of all ages. Since it is a milk based product, it is a good source of protein, calcium and potassium. A single serving of yogurt gives a significant boost of Phosphorous, Potassium, B12, Riboflavin, Zinc, Iodine, and Vitamin B5," Dr. Nandan Joshi, head of nutrition science and medical affairs at Danone India, said.

Besides, providing good nutrition, yogurt contains live and active cultures, living beneficial bacteria which supports digestion and improves gut health, he added.

Fermented products are a vehicle for fortification and can be an efficient tool to combat nutrient deficiencies, that is, vitamin D. Yoghurt consumers across various distinct populations appear to have healthier dietary patterns, nutrient adequacy, and lifestyles compared with non-consumers.

According to the experts, lot of studies are being conducted to gather evidence on the health benefits of yoghurt. There is substantial evidence on health benefits of yogurt like weight management, cardiovascular and gastrointestinal health and cancer.

"Recent meta-analyses have shown that dairy consumption is neutral or beneficial for weight control, coronary disease, diabetes, hypertension, and most cancers.

"Currently, extensive research has been conducted to investigate the mechanisms through which yogurt generates beneficial effects. Gut microbiota appear to be an important factor that can be modified by dietary prebiotics, as well as probiotics such as yogurt," said Fariel Dif, head of communication for Dairy Research and Innovation, Danone.

There is a growing interest in the relationship between yogurt and obesity, as evidenced by the number of publications on the topic over the last few years.

Yogurt may have a superior effect than other food, beverages and snacks on inducing satiety due to its high protein content. Moreover, the substitution of nutrient-poor, energy-dense items with nutrient rich foods such as yogurt can have a beneficial impact on weight maintenance and obesity, Dif said

Further, yogurt is that one by-product of milk that can be better tolerated by people with lactose intolerance, said Dr. Joshi.

Bacterial fermentation of yogurt results in changing lactose (the sugar in milk) to lactic acid, and hence lower intake of lactose.

"The good bacteria present in yogurt secrete an enzyme called Galactosidase that allows them to pre-digest part of the lactose. Therefore, lactose intolerant individuals can better digest yogurt and show better tolerance to yogurt as compared to milk," Dr. Joshi said.

## In light of Kwality's woes, how did Indian dairy majors fare in the past 5 years?

Sep 07, 2017 10:45 AM IST | Source: Moneycontrol.com

<http://www.moneycontrol.com/news/business/stocks-business/in-light-of-kwalitys-woes-how-did-indian-dairy-majors-fare-in-the-past-5-years-2380011.html>

Moneycontrol analyzed the fundamental parameters of some of India's most renowned dairy companies over a five-year period to determine the best performers across a series of financial variables.

[Kwality](#), one of India's most well-known dairy companies, hit the lower circuit on two consecutive trading days earlier this week, thus triggering pandemonium amongst its investors. On the back of subsequent clarifications issued by the company's management in this regard, wherein no facts/events were attributed to such a drastic downfall, the stock not only recovered from yesterday's unexpected intra-day 20

percent correction, but also gained 6 percent by end of the session, and seems to be doing well.

In the wake of this hullabaloo, we analyzed the fundamental parameters of India's dairy majors over a five-year period to determine the best performers across a series of financial variables.

Here's what our study suggests:-

Sales slowdown pan-industry

As seen in the exhibit below, almost all players witnessed a decline in the rate of top-line growth from a year on year perspective. [Hatsun Agro](#), however, managed to swim against the wave by posting a robust set of revenues every year.

Net Sales (Rs Cr)	FY13	FY14	FY15	FY16	FY17
Hatsun AgroProd	2165.02	2493.54	2933.08	3444.69	4199.66
YoY Change	-	15.2%	17.6%	17.4%	21.9%
Heritage Foods	1601.81	1722.04	2072.97	2380.58	2642.89
YoY Change	-	7.5%	20.4%	14.8%	11.0%
Kwality	3929.68	5010.95	5878.34	6414.05	6885.53
YoY Change	-	27.5%	17.3%	9.1%	7.4%
Parag Milk Foods	925.04	1088.25	1444.14	1645.2	1730.74
YoY Change	-	17.6%	32.7%	13.9%	5.2%
Prabhat Dairy	641.12	856.68	1003.36	1167.7	1409.87
YoY Change	-	33.6%	17.1%	16.4%	20.7%

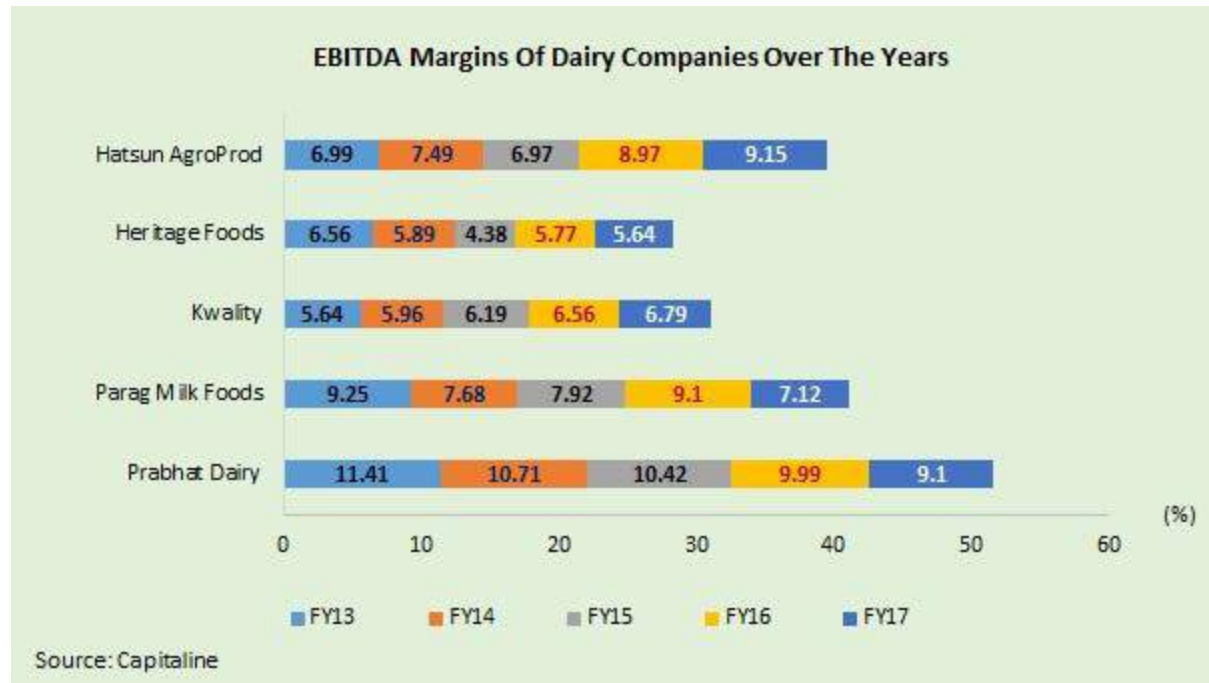
Source: Capitaline

Best Operating Margins



Kwality's and Hatsun Agro's margins recorded an uptick over the years, barring a minor blip in FY15 in case of the latter. EBITDA margins of

other companies were subject to erratic fluctuations when looked at from an overall standpoint.



The most consistent bottom-line performer

Kwality's profits, unlike others, grew steadily every year. Additionally, the degree of

volatility in its profit after tax (PAT) margins was also the least.

Company (Rs Cr)	FY13		FY14		FY15		FY16		FY17	
	PAT	Margin (%)	PAT	Margin (%)	PAT	Margin (%)	PAT	Margin (%)	PAT	Margin (%)
Hatsun Agro Prod	44.67	2.06	81.69	3.27	39.16	1.33	60.5	1.75	133.97	3.18
Heritage Foods	49.95	3.12	45.3	2.63	28.36	1.37	55.43	2.33	66.82	2.53
Kwality	92.35	3.82	105.61	2.69	144.93	2.89	166.53	2.83	173.6	2.71
Parag Milk Foods	20.77	2.25	15.97	1.47	32.21	2.57	47.32	2.88	17.13	2.08
Prabhat Dairy	13.79	2.15	20.78	2.43	25.99	2.59	23.15	1.98	46.94	2.65

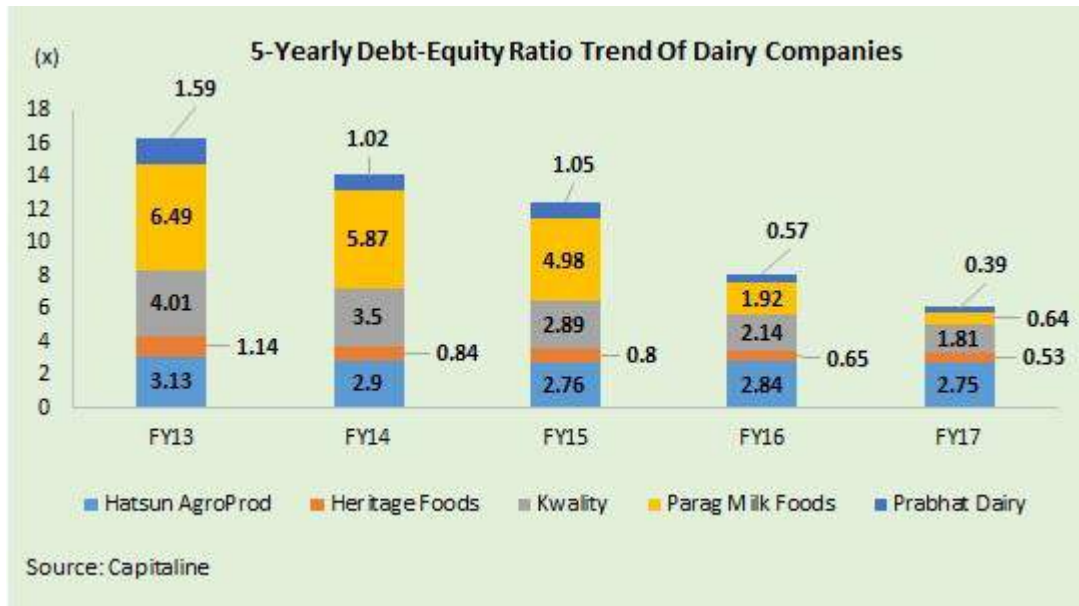
Source: Capitaline

Debt-equity synopsis

Though all companies in the dairy space have been gradually decreasing their dependence on

borrowed funds for operations, the likes of Hatsun Agro and Kwality need significant and

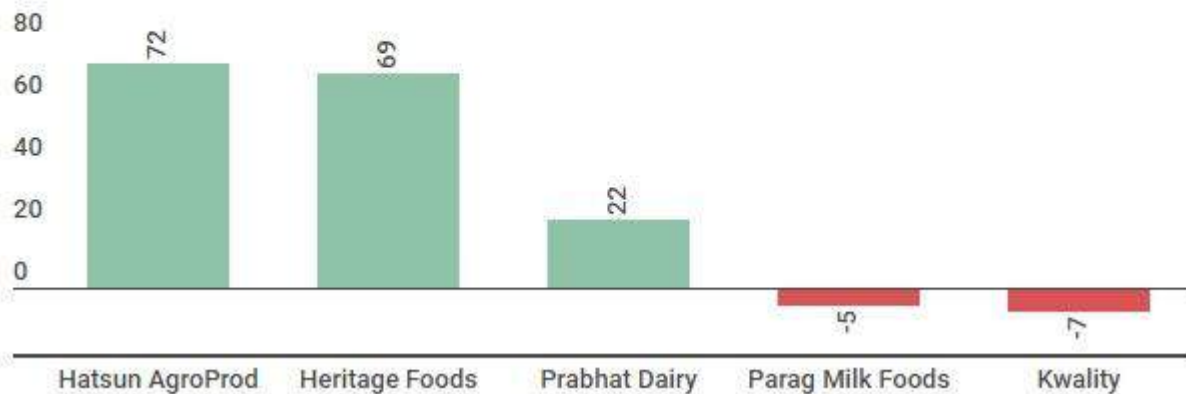
noticeable improvement on this front in comparison to their peers.



With GST now underway, unorganised entities, which comprise a significant chunk of India's dairy industry, are likely to lose out on their pricing advantage to organised counterparts over a period of time. Given the inelastic demand for dairy products across the breadth

and depth of the country, the sector as a whole is poised to grow well going forward. Nonetheless, how things pan out for each of the above companies in due course remains to be seen.

### Year To Date Price Performance (%)





## Milk analysis required to stall adulterated milk sale, states IndiFoss

Tuesday, 05 September, 2017, 08 : 00 AM [IST]

Nandita Vijay, Bengaluru

<http://www.fnbnews.com/Top-News/milk-analysis-required-to-stall-adulterated-milk-sale-states-indifoss-41082>

IndiFoss Analytical is now keen to see that the Indian dairy industry opts for milk analysis to stall the adulterated milk sale in the country.

The Food Safety Standards Authority of India (FSSAI) mandates general testing techniques. However, the need of the hour is access to quality testing instrumentation to ensure accurate and foolproof analysis of milk.

“Moreover, the focus of testing is mainly on final milk and milk products and not on the Raw Milk. The government directive should also focus on the certification of the Fresh Raw Milk,” Satish Mohite, general manager, marketing, IndiFoss Analytical, told FnB News on the sidelines of India Foodex, which concluded in Bengaluru recently.

The dairies must also look beyond pasteurisation, which is a heat treatment to kill pathogenic bacteria and reduce enzymatic activity. This is to make the product safe for consumption and to lengthen its shelf life.

But the reality is that the bacteria is only destroyed and not removed. There is a need to sensitise the consumption and use of safe quality milk.

“Most of the dairies in the country are looking at dairy equipment to scale up their dairies, because the objective is to drive volumes of milk production and related by-products. There is a limited interest in milk analysis instrumentation,” Mohite added.

This is where MilkoScan, which is positioned as a one-of-a-kind milk analyser. The equipment is

the latest in liquid milk testing. It analyses the major components in raw and processed milk, cream and whey.

The process is cost-effective, allowing to measure up to six key parameters from a single milk sample such as fat, protein, total solids, solids non fat (SNF) and lactose, besides screen for milk adulteration. It helps to avoid time-consuming and labour-intensive conventional testing process.

It allows to standardise milk or cream products. Further, the results after analysis can allow dairy farmers to be paid according to the safety of milk and calculating the purity and fat content.

The instrument will lead to an immediate and dramatic reduction in costs by replacing much of traditional laboratory testing. It is also used to test the fat and SNF content to make payments to dairy farmers.

Currently, due to no instrumental regulations for Raw Milk Adulteration testing, a huge Indian Dairy Market remains uninterested in testing Raw Milk Quality.

Due to the above apathy, Indifoss has had a restricted success of catering to just about eight percent of the Indian market, which covers those who are interested in monitoring incoming Raw Milk.

The Denmark-based Foss is a global partner with over 120 offices worldwide and has holds 90 per cent of the global market.

## Foreign News

### **Text message network connects offline farmers in Kenya**

Reuters | Sep 14, 2017, 05:35 IST

<http://timesofindia.indiatimes.com/business/international-business/text-message-network-connects-offline-farmers-in-kenya/articleshow/60505188.cms>

MERU, Kenya, Sept 14 (Thomson Reuters Foundation) –

**W**hen she woke up one morning in February, Catherine Kagendo realised that one of her cows could not stand.

"It was lying on its side, had lost its appetite and was breathing heavily," she told the Thomson Reuters Foundation from her farm in Meru, in eastern Kenya.

With her husband she decided to turn to WeFarm, a text-based network of small-scale farmers, for help.

Within an hour, their text - "one of my lactating cows cannot stand" - generated a flurry of suggestions, from "feed your cow with minerals rich in calcium" to "make sure the cow shed is clean and well-drained so the animals don't slip".

"I realised our cow had milk fever, so gave it calcium-rich feed and it was standing again within hours," Kagendo explained.

She is one of many Kenyan small-scale farmers who lack good information - mostly due to a lack of internet access - on how to manage problems from dry spells to diseases, local farm experts say.

As a result, such farmers often lose their harvest or animals, they said.

But WeFarm, a farmers' network launched in Kenya in 2014 and more recently expanded

to Uganda and Peru, allows people to ask a question by text message and receive advice from their peers.

The service, whose Scottish co-founder Kenny Ewan describes it as "the internet for people with no internet", is free to use and only requires a mobile phone.

Farmers text questions to a local number, and WeFarm transmits the message to users with similar interests in the area, tapping into their knowledge.

"We want farmers to get answers to their problems without needing to access the internet, so the information is available to all," said Mwinyi Bwika, head of marketing at WeFarm.

Although the platform also exists online, over 95 percent of users choose to use it offline, he said.

#### INFORMATION GAP

Kagendo's said that when her animals were ill or her maize crops too dry, she used to have to hire an extension officer to help solve the problem.

"But we had to pay a fee ranging from 500 to 2,000 Kenyan shillings (\$5-20) and most of the time the officer didn't even explain their diagnosis," she said.

That cut into her family's income and left them no better able to understand the diseases facing their cattle and their crops.

"We cannot even afford a smart phone to go online, so finding credible information was near impossible," she said.

According to Bwika, small-scale farmers often lack the information they need because of a lack of cash - most live on less than a dollar a day - as well as poor internet connection and low literacy levels.

"Ewan realised that farmers living just a few miles from each other were facing the same challenges, but with no way to communicate about them. So he created a platform to connect them," Bwika said.

Joseph Kinyua, another farmer from Meru who grows vegetables, said he spends at least 30 minutes per day using WeFarm.

"It's taught me anything from using pest control traps to ensuring that my sprinklers don't put out too much water," he said. "And I know the methods are proven and tested by other farmers."

The knowledge has helped improve the quality of the kale he grows, he said, enough that "I can now sell a kilo at the market at 70 shillings (\$0.70) compared to 50 (\$0.50) previously".

#### PREVENTING PROBLEMS

While the platform might receive dozens of replies to a question, it only sends out to the user a selection of answers judged correct, Bwika said.

But it uses the questions and advice received to help track disease outbreaks or extreme weather spells, and shares those insights with governments and non-governmental organisations, Bwika said.

"In doing so we hope to prevent disease outbreaks and track problems before they occur," he said.

Not everyone shares this optimism, however.

Mary Nkatha, a farmer from Meru, said she found it hard to implement some of the recommendations she received from WeFarm without the practical guidance of an expert.

"If I am told to inject my cow with something, how do I make sure I do it in the right place? And where do I find the equipment?" she asked.

Fredrick Ochido, a Kenya-based consultant on dairy farming, also worries that the platform may be entrenching farmers' poor use of technology, rather than helping them keep up with new trends.

The WeFarm platform has over 100,000 current users in Kenya, Uganda and Peru, and its operators hopes to reach one million farmers in the next year. They also aim to expand the effort to other countries, including Tanzania. (Reporting by Caroline Wambui, editing by Zoe Tabary and Laurie Goering. Please credit the Thomson Reuters Foundation, the charitable arm of Thomson Reuters, that covers humanitarian news, women's rights, trafficking, property rights, climate change and resilience.

## Raw milk is the craft beer of the milk industry

<http://www.newsleader.com/story/news/local/2017/09/13/raw-milk-craft-beer-milk-industry/661047001/>

It's an art to get a well-crafted glass of milk. For Ben and Kristen Beichler, it starts with how the cows graze, what they eat and how they live.

"Our cows are 100 percent grass-fed," said Ben Beichler. "They don't eat corn silage or grain. They're just basically pasture and in the wintertime they eat hay and baleage."

The conditions of the grass the cows are eating and how the cows live, all affect the milk.

"The color of the milk changes as the seasons change," Ben said.

With the amount of rain the area has had and the greenery popping up, that makes the color of the milk change slightly as well as the cream lines change, he said. It also affects the taste of the milk.

Ben equates raw milk and dairy to how area craft breweries can differ in taste, depending on how things are made, what products are used and the brewing process.

"It's all based on what the cow's eating," Ben said. "The same as taphouses throughout Virginia, you know how each taphouse has their own flavor, dairy is the same exact way. Every farm, based on the breed of cows they're milking, what they're feeding them, their management practices are is going to affect their texture, color, cream line, flavor."

It's something the couple has been doing for the past six years — but they've been farming for almost a decade. The two first met at Polyface Farm in Swoope where Ben was an apprentice and Kristen was an intern.

More: [New medieval shop; local call-in radio show; 360 biz tours — The buzz](#)

### Raw milk

On their farm, Creambrook Farm in Middlebrook, they produce raw milk for customers and are milk suppliers for two area farms. They milk about 32 cows once a day. On their farm they milk Jersey cows and have a total of about 80 to 90 heads of cow. With some new cows coming in after calving, their milking cow number should increase to 40 cows.

What they pride themselves on is their raw product — that means the milk straight from the cow.

They first bring in the herd and milk six at a time. Before milking, there is an entire cleaning process done on the cow to ensure a clean raw milk product.

At their farm they uphold the standards of others states that allow the sale of raw milk like Pennsylvania or California. Ben managed one of the largest raw milk dairies in Pennsylvania a few years back, so he's familiar with the state standards, because Virginia doesn't have any.

"You cannot sell raw milk in the state of Virginia," Kristen Beichler said. "The way people can do it is you buy into the herd, like owning a share, and they get milk from their own cows. We don't sell the product, we are a service of taking care of the cows and collecting that milk and giving it to them."

They have their own lab that they test their milk before it leaves. They have duplicated the

standards of Pennsylvania. It's tested for bacteria, the cleanliness of the equipment that is used in the milking process.

Lots of people are turned off by the word "raw." But, for the Beichlers, that's the best kind of milk for you.

More: [Farm experience vital for future generations](#)

Back in the day, to clean up dairy, pasteurization was brought in. In turn, it kind of took away the whole point of milk, the Beichlers said.

"It also kills all the good bacteria," Kristen said. "A lot of people became intolerant to dairy, because with raw milk there's a lot of proteins and enzymes needed to digest it, which I think is really cool. It's like a complete food. It has everything you need to process it. But with pasteurization, it killed all the bad stuff but it also killed off all the good bacteria and vitamins that you need."

More here: [Hemp: Could it be the future of farming?](#)

Quality is of the upmost importance in their operation. They track the temperature of the milk, keep the milking house extremely clean (Ben calls it "hospital clean.")

"The quality, purity and integrity is really important to show that raw milk can be made, produced and enjoyed safely," Kristen said.

### **Selling shares**

Currently they have 90 families part of the raw milk share — amounting to 100 shares. How it works is there is one fee of \$34 to buy into the herd and some people may buy multiple shares, depending on how much milk they want delivered weekly. Then, it's \$34 a month for boarding and delivery. It equates to about \$7.50 a gallon.

They make weekly deliveries to Staunton, Stuarts Draft and down Interstate 64 to Crozet,

Charlottesville, Palmyra, Richmond and Mechanicsville. They do drop-offs at some small local businesses in each place to allow for a centrally located place for their customers in each area.

"We love collaborations with local businesses," Ben said.

They also send milk to Old Church Creamery in Mechanicsville and Caromont Farm outside of Charlottesville.

The couple bought the 243 acre farm back in May and have been doing the herd shares since June and are looking to add more people to the shares.

They also invite the public to come out to their farm this Saturday for a farm day starting at 11 a.m. Tickets are \$10 for adults and \$7 for children.

"It gives the opportunity for our customers and those interested to check out farm life," Ben said.

It also gives the Beichlers a chance to show their love of farming and their family business.

Creambrook Farm is not only a venture for Ben and Kristen, it's something their three-year-old son James gets in on, too. He's the clean-up crew in the morning and can chase around the cows in the day. The Beichlers say he's getting the hang of farming pretty quickly.

"I enjoy just working out in the pastures with the cows," Ben said. "We love drinking milk, we go through about a gallon a day."

They also get to know the cows one-on-one.

"The difference between dairy and beef cows is you develop a little bit of a relationship with them," Ben said. "You can tell who's having a good or bad day and they know when you're having a good or bad day."



## Cargill's Big Data Makes Happier And More Productive Cows

Published on Sep 13 2017 9:40 AM

<https://www.esmmagazine.com/cargill-big-data-makes-happier-cows/49074>

**C**argill, one of the world's biggest agricultural companies, is tapping Big Data to help US farmers make their cows more comfortable – and more productive.

The 152-year-old Minneapolis-based company recently said that it plans to offer its Dairy Enteligen application in the US in the next several months, after introducing it in Italy and Spain. The platform lets consultants and farmers analyse reams of information, from cows' living conditions to diet and milk productivity on smart tablets and computers.

Cargill is part of the growing wave of companies looking to tap into the proliferation of data that's sweeping across industries, from automotive to telecommunications and agriculture. Deere & Co., the world's biggest producer of farm equipment, recently said that it closed on its \$305 million acquisition of Blue River Technology, Inc. – a Silicon Valley-based company that specialises in smart machines. In its annual report last month, Cargill said that it aspires to 'change the game' within its industry with digitalisation and analytics.

The market for precision agriculture – encompassing analytics, drones, digitisation and other technologies – may be worth \$240 billion by 2050, as farmers look for ways to boost productivity as population growth lifts food demand, according to Goldman Sachs Group, Inc.

'The surge in agtech investment has brought the agriculture industry to the threshold of a new agricultural revolution,' Decker Walker, Torsten

Kurth and Matt Westerlund, analysts at Boston Consulting Group, Inc., wrote in a July report. 'The major sources of revenue are changing and new profit pools are being created.'

### Production Boost

"Cargill's seen an 11.7% increase in milk production in Italian farms using the new application, along with lower production costs," Ricardo Daura, global product-line director in Cargill's animal-nutrition digital-insights business, said by phone recently.

"There are multiple things that affect how many gallons of milk a cow produces," Daura said. "If animal welfare is optimal, then farmers will see higher productivity."

Daura said that the company is researching the use of sensors and artificial intelligence as it updates the application.

Dairy farmers have long had access to reams of data, but it hasn't been widely collated, Chantal van der Meijde, the company's global category manager for dairy technology, said in an interview.

"The company's focusing on similar efforts in other segments, including aquaculture," said SriRaj Kantamneni, managing director of digital insights in Cargill's animal-nutrition business.

"What we're really chasing after as a digital business is a connected system," Kantamneni said.



## State Fair dairy display provides educational experience for kids

<http://krqe.com/2017/09/12/state-fair-dairy-display-provides-educational-experience-for-kids/>

Published: September 12, 2017, 4:59 pm Updated: September 12, 2017, 5:01 pm

ALBUQUERQUE, N.M. (KRQE) –

**A** cow and dairy display is drawing a lot of attention at the State Fair.

Dairy Max represents all the local farmers in the southwestern United States. This year, they have a booth at the State Fair for kids and parents to learn more about dairy products like milk and cheese.

“They are now understanding where milk comes from and where chocolate milk comes from, not

a brown cow. They understand a little bit more about well balanced meals and diet,” Jessica Luchini, with Dairy Max, said.

The most popular attraction at the booth is Bella, the mechanical cow. Kids are able to milk Bella and learn where milk comes from.

Anyone who takes a picture with a cow can enter to win free milk for a year.

## Stung by drought, farmers invest more in animal feed

TUESDAY SEPTEMBER 12 2017

<http://www.nation.co.ke/lifestyle/smartcompany/Stung-drought-farmers-invest-animal-feed/1226-4092206-a0w0i/index.html>

**D**airy farmers in the North Rift are increasing the acreage under animal fodder to cushion them against perennial feed shortages.

Stung by the recent drought that cut milk production by nearly half, a number of milk producers who spoke to Smart Company said they are growing different fodder to avoid what they went through during the start of this year.

Although the most recent data from the Ministry of Agriculture indicates that Kenya’s dairy industry has recorded an increase in production after onset of rains, milk producers are leaving nothing to chance.

Mr Julius Kitur, a dairy farmer is one of those, who reduced the acreage under white maize to grow yellow maize on his 52 acre farm in Turbo, Uasin Gishu.

“The cows like the fodder. . . I want to improve on my dairy so that is why I planted the crop,” says that farmer who owns 20 cows.

A number of farmers said their cows recorded drop in milk quantities during one of the worst dry spells in the recent past.

In July, the government waived tax on importation of yellow maize to help control skyrocketing cost of animal feeds and also ease pressure on white variety.

Mr Shadrack Moimett, a farmer from Kesses, Uasin Gishu said although he planted wheat on his 10 acre farm last season, he has opted for maize and pasture this time round.

“This year, I decided to plant five acres of pasture for my cows because of the good prices in the market and then the other for maize,” says the farmer.

Mr Julius Kiptarus, director of livestock production in the Ministry of Agriculture said Trans Nzoia and Uasin Gishu counties have recorded an increase in milk production by between 40 to 50 per cent.

“However there are pockets of arid and semi-arid areas, which have recorded rains below average and as such are yet to fully recover from the effects of drought.

“The Met department has projected that the short rains are expected by October 20 and hope this will improve milk production across the country,” he said in an interview on Thursday. He said a large number of farmers are increasing acreage under fodder.

“We want to encourage that. . . What we are seeing is that farmers are actually balancing while others have fully gone to dairy agri-business also increasing the number of acres even of the maize crop for silage production,” said Mr Kiptarus.

“We want to ask farmers that if they have 50 acres, they can grow maize for commercial purposes and about 10 acres for fodder,” said the official.

According to Mr Nixon Sigey, New KCC Managing Director, poor feeding regime and breeding had contributed to low productivity at the farm level.

“We want to encourage farmers to take advantage of the short rains to grow pasture and other fodder and store them in the event of dry spell. The six month drought was the most painful to farmers. We had cushioned them against drought effects by increasing the producer price by Sh10,” he adds.

In March, the country’s major milk firms - Brookside and New KCC increased milk producer prices, known as farm gate prices, to an all-time high of Sh42 and Sh43 per litre respectively in a bid to shield farmers against effects of drought.

Treasury Cabinet Secretary Henry Rotich in May scrapped duty on imported powder milk to ease the shortage that had resulted to a sharp rise in consumer prices.

The drop was attributed to a severe drought that affected most parts of the country starting October last year.

The price of a half a litre of milk had risen to an all-time high of Sh65 following one of the longest dry spells recorded in the recent past. Processors cut the price in May after a marginal increase in production.

## Butter, cheese sales boost payout to Euro farmers

Tuesday, 12 September 2017 07:55

**I**n its half year report, the co-op says milk supply from farmer suppliers declined by 1% to 5435 million kgMS.

Total payments to farmers rose 24.1% to 2.1 billion euros; the pro forma milk price paid to member dairy farmers reached Euro 38.37 per 100kgMS.

FrieslandCampina chief executive Roelof Joosten says the milk price for farmers recovered this year after several disappointing years.

“The higher sales prices for primarily butter and cheese lie at the root of this recovery,” he says.

“In Western Europe we were successful in passing on the higher guaranteed price in the sales prices. This is reflected in the increased revenue.

“The total payment to member dairy farmers increased by 24% versus the first half of 2016. High growth levels were achieved in Indonesia and Vietnam, and with cheese and butter. In Germany, the Philippines and

Nigeria result trends are not as positive due to local market conditions and negative currency effects, the latter particularly in Nigeria.”

The co-op’s revenue rose 10.7% to Euro 6.1b on volume growth in Southeast Asia, with food service products, added-value segment cheese and pharmaceutical lactose; consumer volumes in Europe in particular were under pressure.

Operating profit rose 7.8% to Euro 275m primarily due to the strong recovery of cheese and butter sales prices.

Joosten attributed the increase in revenue to higher sales prices of 10.3%; the acquisition of Engro Foods in Pakistan at the end of 2016 contributed 2.4%.

Butter products had the highest price increases due to the increased global demand for butter and cream products with a declining supply.

Milk supplied by FrieslandCampina farmers dropped by 53m kgMS over the first half-year 2017 to 5435m kgMS.

## Dairy sector can play 'key role' in feeding world and must 'remain relevant'

News09 Sep 2017 [Alex Black](#)

<https://www.fginsight.com/news/dairy-sector-can-play-key-role-in-feeding-world-and-must-remain-relevant-24694>

**D**airy can play a 'key role' in feeding the world and needs to respond forcefully to anything challenging its integrity, according to Dr Judith Bryans, president of the International Dairy Federation (IDF).

A growing population and rising prosperity have boosted dairy demand and Dr Bryans told the China Dairy Industry Association annual conference there were now opportunities to be seized.

Following increased campaigns from vegan and anti-dairy groups challenging the nutritional and environmental credentials of dairy, Dr Bryans called on the industry to be innovative and ensure its products were relevant to the lives of consumers.

### **Complacent**

"We must never get complacent and forget to tell consumers why we are important to them and the world," she added.

Dr Bryans said the United Nations Sustainable Development Goals made clear dairy was 'part of the solution' to achieve goals surrounding nutrition, lifting people out of poverty and hunger and a healthy planet.

"Dairy has long been recognised as providing high quality nutrition but the sector is now being attacked on this by anti-dairy groups and plant based alternatives. Our environmental credentials are also being questioned."

She added it was essential for the sector to put forward its case dairy products should be an integral part of meeting those goals 'at every opportunity'.

### **Strong case**

"As a sector, we know we have a strong case to put forward to policy makers as to why dairy farming and dairy products should form an integral part of feeding the world and helping to meet the United Nations Sustainable Development Goals. It is essential that we do that at every opportunity."

She added world dairy markets were currently optimistic but the industry needed to continue to develop 'a range of tools' to help dairy farmers through more difficult periods.

## Irish dairy farmers fortunate that consumers drinking 'real milk'

7:00 am - September 9, 2017

<http://www.agriland.ie/farming-news/irish-dairy-farmers-fortunate-that-consumers-drinking-real-milk/>

**W**hile Irish liquid milk producers have been protesting about the possibility of a milk price war, there is still an appreciation of milk as a healthy natural product in this country, Mary Shelman, former director of Harvard Business School's agri business programme, told AgriLand.

Shelman who is the "absentee owner" of a 475ac farm in Kentucky, which is a cash grain operation divided between corn and soya beans, was in Dublin last week to deliver a number of addresses. She was at UCD's Michael Smurfit School and also delivering lectures for Bord Bia's talent programmes, including the Origin Green Ambassador programme.

Currently an advisor to the agri business programme at Harvard, she was engaged by Bord Bia in 2010 to conduct a high-level assessment of the Irish food and drink industry. The objective was to identify new export opportunities. The results were presented in Bord Bia's 'Pathways for Growth' strategy, with key elements incorporated in Food Harvest 2020.

A number of initiatives were introduced by Bord Bia as a result, including Origin Green, the country's national sustainability programme.

"The supermarket industry is very competitive in Ireland right now, and is looking at ways to get customers in-store, and drive traffic. Irish farmers should be happy that people are drinking real milk. In the US, we have seen the emergence of 'fake' milk products such as almond, cocoa and soya milk. Part of that is due to consumers getting caught up in health trends.

"In the US, milk hasn't been promoted as a health product. In Ireland, the dairy industry is in better shape. There is still an understanding and

appreciation of milk as a healthy natural product, and recognisable brands are continuing to tell that story," she said.

In the US, a more generic approach is taken, and nobody is championing fresh milk, Shelman said. "Irish farmers are in a better position than those in many other countries."

One of the key factors having an impact on food production – including the dairy sector – currently, she said, is technology. Introducing new technologies that can be used throughout the supply chain in a farm-to-fork approach, and using the data garnered, will help improve farming operations, she said.

Farmers that adopt new technologies and use the information they gain will be in a stronger position to compete.

"Consumers have changed and are now demanding more of their food from farmers and processors. They want to know more about issues such as animal welfare and the treatment of labour. They also expect companies to invest back in their communities, and to provide information on their products. Basically, transparency is expected."

Bord Bia's Origin Green programme provides the structure to ensure and prove they are doing the right thing, she said. "Investment in Origin Green provides the framework to facilitate success. It provides industry-level trust and confidence in the food system."

Shelman said that while there might be a cost associated with involvement in Origin Green in the short term, in the long term the benefits would be significant. "Farmers are always thinking about the next season, and this approach also applies to investment."

Supermarket price wars are a hot topic, and Shelman said that many people need access to inexpensive safe food. “By concentrating on own label products, sourced directly from producers, Aldi and Lidl have skipped a step in the supply chain, and can offer lower prices. Their adverts prominently feature Irish origin, such as Bord Bia’s Q Mark as a quality selling point for meats and other categories,” she said.

“Last week, Bord Bia launched an Origin Green campaign showcasing Ireland as a country where things are done right, and it is an initiative which could help with the price pressure issue.”

Shelman commended the Irish government for its support of food and drink exports which, she

said, helped farmers and producers to sell on value rather than volume.

Shortages of labour have been cited as obstacles to reaching targets in the dairy sector, but Shelman said that technology could replace labour in some situations.

Globally, there are huge opportunities for Irish food suppliers, she said. “Ireland’s volume is small in the global context, but if producers are able to differentiate, that should put the country in a very powerful position. The rising influence of countries like China, which seek security of supply, will continue. Their actions will have a larger impact on the global food industry.”

## Cow cooling technologies tested at UC Davis dairy facility

<http://www.redbluffdailynews.com/general-news/20170908/cow-cooling-technologies-tested-at-uc-davis-dairy-facility>

**H**ot cows cost California more than cool cows, which is why UC Davis is finding new ways to chill out cattle.

Engineering Manager at the Western Cooling Efficiency Center Theresa Pistochini and UC Davis Department of Animal Science Professor Cassandra Tucker are working with graduate students to find more energy efficient technologies to keep heat-stressed cows cooler.

“The California Energy Commission found \$800 million to \$1 billion dollars are wasted because of heat-stressed cows,” said the professor at Wednesday’s cow event. Heat-stress can cause low production, fertility issues and even death for cows, she said.

Off of Dairy Road in Davis, the pungent smell of methane is inescapable. Everyone wears plastic covers over their shoes to prevent cross-contamination. New technologies are being

tested and include two approaches: a cooling mat and air conditioning — sort of. Both new methods and traditional methods were set up June 12 for cows to rotate out of and testing finished this week. Graduate students checked the temperature of cows every three minutes as part of the trial.

On one side of the stalls, cold water runs through rubber mats placed under feeding beds and cows lay on top of them to cool down.

“It’s like the opposite of a heating blanket,” said Paul Fortunato, the outreach manager for WCEC.

On the other side is a large evaporator cooler that works with a fan to blow cooled water through vents onto the cows, similar to air conditioning.

“Sprayers and massive fans are typical (cooling methods) but they’re not consistent,” Fortunato explained. “Sometimes it just spreads gunk all



over the cows and doesn't actually cool them down."

These new methods at UC Davis are designed to reduce water use by up to 86 percent and electricity use by as much as 38 percent over conventional methods.

Researchers videotaped cows day and night and now have months of footage to process. Though they're not sure what method works best, they're confident new methods are working at least as well as traditional fan and spraying methods, said Pistoichini, the lead researcher.

Milk is the most valued agricultural commodity in California, with \$9.4 billion in retail sales in 2014. Roughly one in every five dairy cows in the nation is in California.

"The process of rumination, where cows ferment their food, produces a lot of heat, as does milk production itself," Tucker stated. "When the outside temperatures also rise, it's a challenge for the animal in how she's going to try to keep cool. This project is trying to reduce the energy and water use associated with that to help both the cows and the dairy producers."

The project is part of a four-year, \$1 million grant from the California Energy Commission to help improve water and energy efficiency in California's dairy industry. The data being collected now will help determine which technology the team should use to pilot at a commercial dairy in a future phase of the project.

## M&S launches the first ever RSPCA assured milk

[Lisa Bowman for Metro.co.uk](#) Wednesday 6 Sep 2017 11:57 am

<http://metro.co.uk/2017/09/06/ms-launches-the-first-ever-rspca-assured-milk-6906966/>

The store is supplied by 37 farms, and each has achieved the RSPCA Assured certification, which covers all aspects of bovine welfare associated with milk production, including calf rearing, accommodation, health planning, transport, feed and grazing.

From today, all fresh milk at M&S will carry the RSPCA Assured logo on its label.

The move covers all milk products in the store, however it doesn't cover their organic milk, as this is not supplied by the M&S Milk Pool.

This comes after [shocking images](#) surfaced back in March of calves crammed into solitary pens at a farm that supplied milk to M&S.



It would be great if this was a typical image in the UK dairy industry but unfortunately, this is not the case (Photo by Jonathan Nicholson/NurPhoto via Getty Images)

RSPCA auditors visited every single farm that supplies the store during the months of April, May and June this year.

They checked 332 standards on each visit and the average number of non-compliances was

two per farm, which means that on average, 99% of standards were met.

14 of 37 farms met every single standard, and all farms who weren't up to scratch made changes to rectify their standards by mid-July.



A vet checking a calf at a dairy farm in North Yorkshire (not an M&S supplier) (photo by Mike Kemp/In Pictures via Getty Images)

Consumers are able to view RSPCA Assured assessment reports for each of M&S's Milk Pool supplier farms via their [interactive online map](#)

This map shows where M&S milk is sourced from, summary results for each farm and a link to download the full assessment report.

Read more: <http://metro.co.uk/2017/09/06/ms-launches-the-first-ever-rspca-assured-milk-6906966/#ixzz4sjDeIBBt>

## Project attracts new skills to dairy

05 Sep, 2017 12:00 PM

<http://adf.farmonline.com.au/news/magazine/industry-news/general/project-attracts-new-skills-to-dairy/2755798.aspx>

**T**he dairy industry has skills: agronomists, vets, international traders, scientists. That's even before including farmers, who are all of the above. Nevertheless, the industry can always use more skills.

Gardiner Dairy Foundation, in partnership with Monash University, has identified a way to attract new people with skills to dairy. The Monash Industry Team Initiative (or MITI, for short) partners high-calibre student teams with dairy organisations to design innovative solutions to real world issues.

This whets the appetite of the students for a rewarding career in dairy, often giving them a taste of life in regional Victoria. The dairy organisations get skilled and enthusiastic young people bringing a fresh set of eyes to problems. It's a win:win.

One of the 15 MITI teams for 2016/2017 summer was placed with DataGene, who wanted to

assess the plausibility of cow classification by video so that the number of classifications could increase to improve breeding value accuracy. Classification is a way of scoring a cow's physical attributes.

Scoring must be performed by a trained classifier with experience and a strong eye for the breed of cow. However, many traits are directly related to a geometric measurement. For example, the "muzzle" trait is a measurement of the distance between the nostrils. A wide muzzle is a positive trait because it suggests that the cow can graze effectively.

From a farmer's perspective, classification is important because an understanding of the physical traits that can be improved will assist breeding decisions that can make those improvements. If a cow has a lower than desirable score for stature, for example, it can be mated with a bull that typically produces tall progeny.

From the perspective of DataGene, more classification data will lead to more accurate breeding values.

Classifying cows by video might increase the number of classifications records that can be used for genetic evaluation. The farmer could simply video their cows and then have the video uploaded to be scored. Perhaps software could be developed to automatically measure some of the traits that are measured traits, such as rump angle or stature traits, potentially saving classifiers some time.

Glen Barrett is operations manager of DataGene and supervised the MITI team. "It was an exciting opportunity to engage with students and see what they could deliver," Mr Barrett said. "These types of projects are helping us think differently about improving our genetic evaluations."

One of the students working on the technology was third-year electrical engineering student Sam McCarthy. Mr McCarthy and his fellow team members were able to suggest some potential solutions to the technical challenges posed by automatically measuring a cow.

"When we used video taken by a smartphone, we found that the distance calculations rely on knowing how the camera is moving," he said. "We won't always know that or be able to control that perfectly. Microsoft Kinect could get around the problem."

What's Microsoft Kinect? It's a sensor technology used on the Xbox gaming console. That may or may not be the answer for this technology, but it's a great example of how fresh thinking can throw up truly innovative solutions.

"This is just step one," Mr Barrett said about the future of this technology. "We have demonstrated it's possible, now we need to work with the breed societies to create a tool that is both useful and usable."

The MITI program has also been opening opportunities in dairy manufacturing.

Milk is complex. The foods that it is made into are even more complex - powders, butter, creams, yoghurts, desserts, any number of types of cheese, just for a start. This is the job of the dairy factory. Take in raw material that is highly perishable, and varies in composition, then convert it into diverse range of delicious products, usually handling volumes that are breathtakingly large.

It's a job that requires skills. Specifically, engineering skills.

Warrnambool Cheese and Butter innovation manager Clinton Hill said: "The students say that they're surprised by the complexity of our job and just how interesting the engineering aspects of the industry are. This Gardiner program has helped us give young engineers exposure to the dairy industry -- an industry that they otherwise wouldn't have considered as a career option."

As dairy manufacturers shift away from bulk commodities towards more consumer-focused products, they require increasingly sophisticated skill sets. The Gardiner initiative was established to overcome this challenge of attracting high-calibre engineers and other important skills to the dairy sector.

It's been a common refrain across all the dairy manufacturers that have been involved - Devondale Murray Goulburn, Fonterra, Bega Cheese, Warrnambool Cheese and Butter, Lion, Parmalat and Burra Foods - accounting for more than 90 per cent of Victoria's milk.

The Gardiner Dairy Foundation pilot program in 2015 was highly successful. Seven teams of students with a focus on engineering, education and information technology were embedded with five dairy companies. In 2016 there was an increase in both students and manufacturers, with 10 teams. This year, the program has grown again to involve 41 students across 15 projects.

And the students?

Meghna Lahiri was placed with Burra Foods. "It was just amazing," she said. "I enjoyed the work,

as well as the countryside. Very pretty, good weather, the culture, it was just amazing."

Ms Lahiri had just finished her Master of Business Information Systems in November before starting the Gardiner internship in December. "After finishing my internship, Burra Foods offered me a job," she said. "The

internship really, really helped, because it was very much linked to what I was doing in my Masters -- understanding the business requirements and aligning the IT systems."

The Gardiner Dairy Foundation is looking forward to introducing another cohort of skills to our great industry in the 2017/18 summer.

## **The Netherlands has become an agricultural giant by showing what the future of farming could look like.**

<http://www.nationalgeographic.com/magazine/2017/09/holland-agriculture-sustainable-farming/>

By Frank Viviano

**I**n a potato field near the Netherlands' border with Belgium, Dutch farmer Jacob van den Borne is seated in the cabin of an immense harvester before an instrument panel worthy of the starship Enterprise.

From his perch 10 feet above the ground, he's monitoring two drones—a driverless tractor roaming the fields and a quadcopter in the air—that provide detailed readings on soil chemistry, water content, nutrients, and growth, measuring the progress of every plant down to the individual potato. Van den Borne's production numbers testify to the power of this "precision farming," as it's known. The global average yield of potatoes per acre is about nine tons. Van den Borne's fields reliably produce more than 20.

That copious output is made all the more remarkable by the other side of the balance sheet: inputs. Almost two decades ago, the Dutch made a national commitment to sustainable agriculture under the rallying cry "Twice as much food using half as many

resources." Since 2000, van den Borne and many of his fellow farmers have reduced dependence on water for key crops by as much as 90 percent. They've almost completely eliminated the use of chemical pesticides on plants in greenhouses, and since 2009 Dutch poultry and livestock producers have cut their use of antibiotics by as much as 60 percent.

One more reason to marvel: The Netherlands is a small, densely populated country, with more than 1,300 inhabitants per square mile. It's bereft of almost every resource long thought to be necessary for large-scale agriculture. Yet it's the globe's number two exporter of food as measured by value, second only to the United States, which has 270 times its landmass. How on Earth have the Dutch done it?

Seen from the air, the Netherlands resembles no other major food producer—a fragmented patchwork of intensely cultivated fields, most of them tiny by agribusiness standards, punctuated by bustling cities and suburbs. In the country's principal farming regions, there's almost no



potato patch, no greenhouse, no hog barn that's out of sight of skyscrapers, manufacturing plants, or urban sprawl. More than half the nation's land area is used for agriculture and horticulture.

Banks of what appear to be gargantuan mirrors stretch across the countryside, glinting when the sun shines and glowing with eerie interior light when night falls. They are Holland's extraordinary greenhouse complexes, some of them covering 175 acres.

These climate-controlled farms enable a country located a scant thousand miles from the Arctic Circle to be a global leader in exports of a fair-weather fruit: the tomato. The Dutch are also the world's top exporter of potatoes and onions and the second largest exporter of vegetables overall in terms of value. More than a third of all global trade in vegetable seeds originates in the Netherlands.

The brain trust behind these astounding numbers is centered at Wageningen University & Research (WUR), located 50 miles southeast of Amsterdam. Widely regarded as the world's top agricultural research institution, WUR is the nodal point of Food Valley, an expansive cluster of agricultural technology start-ups and experimental farms. The name is a deliberate allusion to California's Silicon Valley, with Wageningen emulating the role of Stanford University in its celebrated merger of academia and entrepreneurship.

Ernst van den Ende, managing director of WUR's Plant Sciences Group, embodies Food Valley's blended approach. A renowned scholar with the casual manner of a barista at a hip café, van den Ende is a world authority on plant pathology. But, he says, "I'm not simply a college dean. Half of me runs Plant Sciences, but the other half oversees nine separate business units involved in commercial contract research." Only that mix, "the science-driven in tandem with the market-driven," he maintains, "can meet the challenge that lies ahead."

The challenge? Put in bluntly apocalyptic terms, he says, the planet must produce "more food in the next four decades than all farmers in history have harvested over the past 8,000 years."

That's because by 2050, the Earth will be home to as many as 10 billion people, up from today's 7.5 billion. If massive increases in agricultural yield are not achieved, matched by massive decreases in the use of water and fossil fuels, a billion or more people may face starvation. Hunger could be the 21st century's most urgent problem, and the visionaries working in Food Valley believe they have found innovative solutions. The wherewithal to stave off catastrophic famine is within reach, van den Ende insists. His optimism rests on feedback from more than a thousand WUR projects in more than 140 countries and on its formal pacts with governments and universities on six continents to share advances and implement them.

A conversation with van den Ende is a white-knuckle ride on a torrent of brainstorming, statistics, and predictions. African drought? "Water isn't the fundamental problem. It's poor soil," he says. "The absence of nutrients can be offset by cultivating plants that act in symbiosis with certain bacteria to produce their own fertilizer." The soaring cost of grain to feed animals? "Feed them grasshoppers instead," he says. One hectare of land yields one metric ton of soy protein, a common livestock feed, a year. The same amount of land can produce 150 tons of insect protein.

The conversation rushes on to the use of LED lighting to permit 24-hour cultivation in precisely climate-controlled greenhouses. It then detours to a misconception that sustainable agriculture means minimal human intervention in nature.

"Look at the island of Bali!" he exclaims. For at least a thousand years, its farmers have raised ducks and fish within the same flooded paddies where rice is cultivated. It's an entirely self-contained food system, irrigated by intricate

canal systems along mountain terraces sculpted by human hands.

“There’s your model of sustainability,” van den Ende says.

At every turn in the Netherlands, the future of sustainable agriculture is taking shape—not in the boardrooms of big corporations but on thousands of modest family farms. You see it vividly in the terrestrial paradise of Ted Duijvestijn and his brothers Peter, Ronald, and Remco. Like the Balinese, the Duijvestijns have constructed a self-contained food system in which a near-perfect balance prevails between human ingenuity and nature’s potential.

At the Duijvestijns’ 36-acre greenhouse complex near the old city of Delft, visitors stroll among ranks of deep green tomato vines, 20 feet tall. Rooted not in soil but in fibers spun from basalt and chalk, the plants are heavy with tomatoes—15 varieties in all—to suit the taste of the most demanding palate. In 2015 an international jury of horticultural experts named the Duijvestijns the world’s most innovative tomato growers.

Since relocating and restructuring their 70-year-old farm in 2004, the Duijvestijns have declared resource independence on every front. The farm produces almost all of its own energy and fertilizer and even some of the packaging materials necessary for the crop’s distribution and sale. The growing environment is kept at optimal temperatures year-round by heat generated from geothermal aquifers that simmer under at least half of the Netherlands.

The only irrigation source is rainwater, says Ted, who manages the cultivation program. Each kilogram of tomatoes from his fiber-rooted plants requires less than four gallons of water, compared with 16 gallons for plants in open fields. Once each year the entire crop is regrown from seeds, and the old vines are processed to make packaging crates. The few pests that manage to enter the Duijvestijn greenhouses are greeted by a ravenous army of defenders such as the fierce *Phytoseiulus persimilis*, a predatory

mite that shows no interest in tomatoes but gorges itself on hundreds of destructive spider mites.

A few days before I visited the Duijvestijns’ operation, Ted had attended a meeting of farmers and researchers at Wageningen. “This is how we come up with innovative ways to move ahead, to keep improving,” he told me. “People from all over Holland get together to discuss different perspectives and common goals. No one knows all the answers on their own.”

The search for answers to a life-or-death question gave rise to one of the Netherlands’ most innovative companies. Half a century ago, Jan Koppert was growing cucumbers on his land and using toxic chemical sprays to fend off pests. When a physician declared him allergic to pesticides, Koppert set out to learn all he could about the natural enemies of insects and arachnids.

Today Koppert Biological Systems is the global pacesetter in biological pest and disease control, with 1,330 employees and 26 international subsidiaries marketing its products in 96 countries. Koppert’s firm can provide you with cotton bags of ladybug larvae that mature into voracious consumers of aphids. Or how about a bottle containing 2,000 of those predatory mites that hunt down spider mites on plants and suck them dry? Or a box of 500 million nematodes that mount deadly assaults on fly larvae that prey on commercial mushrooms?

Koppert’s legions make love as well as war, in the guise of enthusiastic bumblebees. No form of artificial pollination matches the efficiency of bees buzzing from flower to flower, gathering nectar to nourish their queen and helping to fertilize the ovaries of plants along the way. Each Koppert hive accounts for daily visits to half a million flowers. Farmers using the bees typically report 20 to 30 percent increases in yields and fruit weight, for less than half the cost of artificial pollination.



Nowhere is the Netherlands' agricultural technology more cutting-edge than in the embryonic organism in which most food is literally rooted: seeds. And nowhere are the controversies that surround the future of agriculture more heated. Chief among them is the development of genetically modified organisms to produce larger and more pest-resistant crops. To their critics, GMOs conjure up a Frankenstein scenario, fraught with uncertainty about the consequences of radical experimentation with living entities.

Dutch firms are among the world leaders in the seed business, with close to \$1.7 billion worth of exports in 2016. Yet they market no GMO products. A new seed variety in Europe's heavily regulated GMO arena can cost a hundred million dollars and require 12 to 14 years of research and development, according to KeyGene's Arjen van Tunen. By contrast, the latest achievements in the venerable science of molecular breeding—which introduces no foreign genes—can deliver remarkable gains in five to 10 years, with development costs as low as \$100,000 and seldom more than a million dollars. It is a direct descendant of methods employed by farmers in the Fertile Crescent 10,000 years ago.

The sales catalog of Rijk Zwaan, another Dutch breeder, offers high-yield seeds in more than 25 broad groups of vegetables, many that defend themselves naturally against major pests. Heleen Bos is responsible for the company's organic accounts and international development projects. She might be expected to dwell on the fact that a single high-tech Rijk Zwaan greenhouse tomato seed, priced below \$0.50, has been known to produce a mind-boggling 150 pounds of tomatoes. Instead she talks about the hundreds of millions of people, most of them women and children, who lack sufficient food.

Like many of the entrepreneurs at Food Valley firms, Bos has worked in the fields and cities of the world's poorest nations. With lengthy postings to Mozambique, Nicaragua, and Bangladesh over the past 30 years, she knows

that hunger and devastating famine are not abstract threats.

"Of course, we can't immediately implement the kind of ultrahigh-tech agriculture over there that you see in the Netherlands," she says. "But we are well into introducing medium-tech solutions that can make a huge difference." She cites the proliferation of relatively inexpensive plastic greenhouses that have tripled some crop yields compared with those of open fields, where crops are more subject to pests and drought.

Since 2008 Rijk Zwaan has supported a breeding program in Tanzania at a 50-acre trial field in the shadow of Mount Kilimanjaro. Its seeds are sent to Holland for quality control tests on germination rates, purity, and resistance to pests and diseases. Collaborative projects are under way in Kenya, Peru, and Guatemala. "We try to develop seeds for their specific conditions," Bos says. But the starting point, she adds emphatically, cannot be the sort of top-down approach that has doomed many well-meaning foreign aid projects.

"We have constant, tremendously important conversations with the small growers themselves—on their needs, on the weather and soil conditions they face, on costs," she says.

For some Dutch researchers, concern for people threatened by hunger stems in part from a national trauma: The Netherlands was the last Western country to suffer a serious famine, when 10,000 to 20,000 people died in German-occupied lands during the final year of World War II. Decades later, WUR's Rudy Rabbinge, professor emeritus of sustainable development and food security, took up the cause when he helped devise extensive changes in the faculty, student body, and curriculum that transformed the institution into what he calls "a university for the world, and not simply for the Dutch." Today a hefty share of the academic and research activities at WUR are focused on problems facing poor nations.

Some 45 percent of its graduate students—including nearly two-thirds of all Ph.D. candidates—are recruited abroad, representing more than a hundred nations. Asians, led by Chinese and Indonesians, outnumber almost all non-Dutch Europeans combined. WUR alumni are found in the highest echelons of agricultural ministries across Africa, Asia, and Latin America.

In a campus cafeteria, I sit down with three of WUR's most promising students, a description that, not long ago, would have meant male and Dutch born. All three are young women, hailing from Uganda, Nepal, and Indonesia.

"I met a Wageningen alumna when I was an undergrad in Uganda," Leah Nandudu tells me when I ask how she wound up here. "She was an expert on phenotyping," the advanced studies that paint a detailed portrait of a plant's traits and potential. "It inspired me to discover that an African could do these things. She was the future; she was where we need to go."

The meeting eventually led Nandudu to a WUR scholarship. Her father farms three acres, split between coffee and bananas. Her mother teaches English in a primary school and helps in the field. "We have all the problems farmers face everywhere today, only much worse, especially due to the consequences of climate change."

Pragya Shrestha was raised in the Nepali countryside, some parts of which have been wracked by years of reliance on pesticides and fertilizers. Sounder, sustainable methods have made few inroads so far.

"It's a political problem," she says. New cultivation methods can't be implemented because of a shortage of public funding. "It's also a population problem, the fragmentation of the land into smaller and smaller parcels, suitable only for the use of inefficient human labor and generating very little income."

Renna Eliana Warjoto is from Bandung, the third largest city in Indonesia. "People are mistrustful of ideas that come from abroad," she says, as

Shrestha and Nandudu nod in agreement. "Farmers are so used to having marginal lives and incomes," she adds, "that they have a hard time believing things could be different."

In 1944-45 a lethal famine struck the island of Java, where Bandung is located, killing some 2.4 million people. Devastating regional crop failures have haunted Indonesia as recently as 2005. Food supplies periodically run out in rural Nepal because of drought and high prices on essential imports. In 2011 a famine in the Horn of Africa affected 13 million people, and in 2017 1.6 million Ugandans face starvation without rapid assistance from abroad. All these events were unimaginable at the time, yet they pale in comparison to what could lie ahead. The number of people menaced by famine in just three African nations and across the Red Sea in Yemen exceeds 20 million today and is rising inexorably, according to the United Nations. "We are facing the largest humanitarian crisis since the creation of the UN," the organization's emergency relief coordinator, Stephen O'Brien, warned in March.

"Our most difficult task is changing the perceptions of our own people—about the crisis we confront and what we must do to address it," Nandudu says. "That's my job when I go home. We cannot turn our faces away from reality."

Some 4,000 miles south of Wageningen, in a family-owned bean field in Africa's Eastern Rift Valley, a team from SoilCares, a Dutch agricultural technology firm, explains the functions of a small handheld device. In conjunction with a cell phone app, the device analyzes the soil's pH, organic matter, and other properties, then uploads the results to a database in the Netherlands and returns a detailed report on optimal fertilizer use and nutrient needs—all in less than 10 minutes. At a cost of a few dollars, the report provides input that can help reduce crop losses by enormous margins to farmers who have never had access to soil sampling of any kind.

Less than 5 percent of the world's estimated 570 million farms have access to a soil lab. That's the kind of number the Dutch see as a challenge.

"What does our work mean for developing countries? That question is always raised here," says Martin Scholten, who directs WUR's Animal Sciences Group. "It's part of every conversation."

## Report: Emerging technologies could help address dairy industry challenges

<http://www.fooddive.com/news/report-emerging-technologies-could-help-address-dairy-industry-challenges/503925/>

Sept. 1, 2017

A study by Frost & Sullivan business consultants profiled new food safety technologies available in the dairy industry — a sector facing numerous challenges. These include ultra-high pressure and ultraviolet (UV) processing methods used when thermally treating milk to reduce color changes or gelation during processing and storage.

According to the study, consumer demand and current market conditions are prompting a reshaping of the dairy industry to deliver improved product quality, stability and safety to customers, while reducing energy and costs.

"Standardization and compliance are crucial to success," said Frost & Sullivan TechVision Senior Industry Analyst Cecilia Van Cauwenberghe. "Food safety best practices must be implemented from the beginning, including the adoption of technology for pathogens, allergens, mycotoxins, genetically modified organisms (GMOs) and yeast detection."

Dive Insight:


Opportunities for companies throughout the dairy sector to collaborate through partnerships, mergers and acquisitions, co-development and other models will help leverage these new industry technologies, the study found. Other

technologies the dairy industry can take advantage of are advanced material design, microelectronics and nanotechnology, advanced thermodynamics, food engineering and processing, and Internet of Things (IoT) innovations to track products and ensure their safety.

The dairy industry is one of the most highly regulated in the U.S., driven by U.S. Food and Drug Administration requirements covering product safety, pasteurization, equipment sanitation, labeling and distribution. These regulations have helped limit U.S. foodborne illness outbreaks involving dairy products but can significantly increase production costs.

Challenges in today's dairy industry are higher feed and fuel prices, oversupply and pricing pressures, labor shortages, the rising incidence of milk allergies and lactose intolerance, and increasingly popular milk-like products made from plants such as soy, rice, almonds, hemp and others. According to Mintel, U.S. non-dairy milk sales grew 9% in 2015, while dairy milk sales declined 7% during the same period.

Plant-based milks also have a longer shelf life than dairy-based milk. Unopened packages of plant-based products are typically good a month



or more past the date on the container, while cow's milk, if properly stored, usually lasts for a week past its best-by date. Such differences are not lost on consumers, who are flocking to buy plant-based milk products out of health, safety, ethical and environmental concerns.

Despite all these challenges, the research study emphasized the dairy industry is in a position to leverage new technologies to bolster consumer confidence and help ensure a better — and more profitable — market for its products.