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Farmers during the ongoing Kisan Sansad at Jantar Mantar in New Delhi on Monday. — PTI

Pesticide manufacturing unit busted in city, 2 held

AGE CORRESPONDENT
NEW DELHI, AUG. 2

The Delhi Police have busted a spurious pesticide manufacturing plant in the national capital's Mundka area and arrested two men, officials said on Monday.

The arrested accused, Mohan Lal and Aman, had rented two godowns at Hiran Kudna village two months ago for manufacturing the fake pesticides. They had made an initial investment of ₹9 lakh, they said.

A complaint was received from the representative of a pesticide manufacturing company alleging that someone was infringing the firm's trademark by producing spurious products in its name, the police said.

A raid was conducted on July 30 and a large quantity of spurious material

bearing the names of several companies was found stacked at the manufacturing plant in Mundka, they said.

Deputy commissioner of police (Outer) Parvinder Singh said Mohan Lal, Aman, Vijay and Rajender were engaged in manufacturing and selling spurious pesticides and fungicides with the branding of different companies. They also used to sell seeds of different crops treated with these fake pesticides.

Fake raw material found at the plant and machinery used for manufacturing these spurious products was seized, he said.

During questioning, it was revealed that Mohan Lal's son-in-law Naveen runs a pesticide shop in Indra Market, Tis Hazari road. Aman also ran a pesticide shop in the same market, Singh said.

Vijay, who hails from

Punjab's Bhatinda, is also a supplier of spurious pesticides. His associate Rajender is a resident of Rajasthan's Chittorgarh. The two are major stakeholders in this business, he said.

"Vijay came in contact with Mohan Lal in Indra Market here. Lal's candle business was not going well so he started doing business with Vijay Aman was also roped in by him as his pesticide shop was not doing much business," the DCP said.

According to the deal between the accused, Vijay was responsible for supply, Rajender was tasked with packaging and arranging infrastructure while Mohan Lal and Aman looked after production.

Police said they are looking for Vijay and Rajender and further investigation into the case is underway.

HT MINT, ND 04 AUGUST 2021

PI Industries deal for ISLL's API biz to perk up earnings

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PI Industries Ltd's performance for the June quarter was softer than expected. What then explains the 12% surge in its share price over Friday's close? PI Industries had released its quarterly results on Friday after market hours. Its announcement about acquiring the active pharmaceutical ingredient (API) and intermediate business of Ind-Swift Laboratories Ltd (ISLL) seems to have caught the eye of investors. The acquisition would be on a slump sale basis at an enterprise value of ₹1,530 crore.

Analysts see this acquisition as the firm's strong foray into the pharma business, something that it had been planning. ISLL has a diversified portfolio of more than 20 products, and is a market leader in several of them. It also has a good R&D product pipeline. The revenue of ISLL's API business was ₹837 crore for FY21 and the Ebitda margin stood at 23%, said analysts at Sharekhan in a note. Ebitda is earnings before interest, tax, depreciation and amortization. Based on these, they estimate that

Decent show

A strong growth in exports helped PI Industries improve its earnings despite a decline in domestic sales.



Note: CSM refers to custom synthesis manufacturing.
Source: Motilal Oswal Financial Services Ltd, Company

SATISH KUMAR/MINT

the valuation is at a reasonable 7.8 times FY21 EV/Ebitda.

PI Industries' FY23 Ebitda is likely to increase by 10.5%, while its profit after tax may rise by 6.5% due to the acquisition

would increase by 10.5%, while its profit after tax may rise by 6.5% due to the acquisition.

Those at Motilal Oswal Financial Services Ltd have raised earnings per share estimates for FY23 by 4%.

Meanwhile, the firm's domestic sales were impacted due to slower agriculture activities given the delay in the progress of monsoon. Coupled with a high base, domestic revenues dropped 13% year-on-year (y-o-y). Another pressure point was the increase of 26% in overheads. One-time expenses pertaining to covid management, consulting fees and other costs related to various strategic projects were behind this increase. Ergo, the 9% increase in Ebitda on a y-o-y basis is an optical relief. Both revenue and Ebitda have fallen short of Street estimates.

That said, revenues from custom synthesis manufacturing (CSM) lent support. CSM sales contribute more than two-thirds of the overall revenue for the company and grew 31% y-o-y. The firm's strength lies in the CSM segment that remains a strong growth driver. The order book was robust at \$1.5 billion and ensures sustainable growth for the next three years, said analysts. Additionally, the firm plans to commercialize six new molecules in FY22, of which the commissioning of three is under progress. It also plans to launch three new molecules in the domestic market in the current quarter.

Sustainable production is the way forward

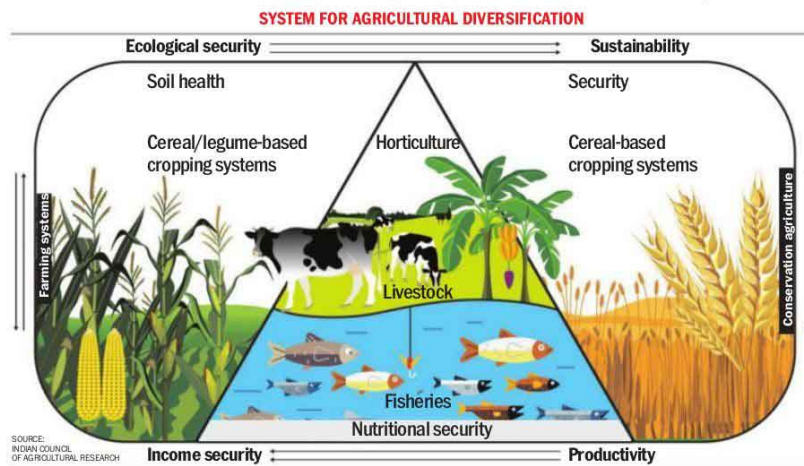
GURSHARAN SINGH & MS TOOR

There is no dearth of avenues for farmers who are keen to innovate. There are many success stories where farmers have multiplied their income while working on a small piece of land. Small and marginal farmers can't survive on the wheat-paddy monoculture as they have very little marketable surplus to be sold in the market. They have to opt for a sustainable economic enterprise. The growing of off-season vegetables on the periphery of towns and cities provides quick returns.

WITHOUT going into the merits/demerits of the Central farm laws, one wonders at the haste and the way these were introduced and passed in Parliament last year. Anyone who was not even conversant with the content of these laws also opposed these. All this resulted in a chaotic situation which could have been avoided. The introduction of these laws in Parliament should have been preceded by wide-ranging discussion involving farmers, agri-traders, academicians and policy-makers, both from Central and state governments. Consensus could have emerged at least on some clauses/issues, paving the way for genuine modifications, subsequently leading to broad mutual agreement.

Even if the farm laws are repealed or modified at some stage, it would less be an occasion to rejoice and more to introspect. No farmer can shut his eyes to the stark reality. How long will the assured purchase of wheat and paddy at MSP continue? Ultimately, everyone has to be on his own. Only those who adopt innovation in agriculture. We need to come out of the comfort zone of wheat-paddy cultivation. There is little agricultural work after sowing wheat or transplantation of paddy, that too with hired labour. This duration till the harvest of the crop can be utilised to bring innovation and diversity to the farming practices to boost income.

The landholdings are shrinking day by day and the challenge to double the income of the farmers is becoming bigger. Unfortunately, the development of technologies in agriculture was less focused on



SOURCE: INDIAN COUNCIL OF AGRICULTURAL RESEARCH

the small and marginal farmers who constitute more than 60% of our farm sector manpower. However, there is no dearth of avenues if one is determined to innovate and there are many success/motivational stories where small farmers have multiplied their income while working on a small piece of land. Small and marginal farmers cannot survive on the wheat-paddy monoculture as they have very little marketable surplus to be sold in the market. They have to opt for a sustainable economic enterprise for better living as well as for more income. The growing of off-season and seasonal vegetables, especially by the farmers on the periphery of towns and cities, provides quick

income to the growers. Protected cultivation of off-season vegetables is even more profitable. Raising orchards on a portion of the land can also boost the revenue of the farmers, apart from lending diversity to agriculture. Subsidiary enterprises in agriculture like beekeeping and mushroom-growing give ample opportunities to raise the income of farmers. Floriculture is another lucrative area, which if undertaken with precision and dedication, has the potential to increase farmers' income manifold on a small piece of land. Dairy farming has the dual advantage of bringing diversity to agriculture and also a rise in the earnings of farmers. It will be the

best bet if the small farmers are given technology, are motivated to process their products on a small scale and undertake marketing, facilitated by government policies.

The integrated farming system can be a solution where the small and marginal farmers increase their net income by opting for small segregation of land into diversified and high-value crop enterprises. The inclusion of other economically viable enterprises like fisheries, poultry, dairy, vegetable and fruits increase the net income. One such model of an integrated farm (crops, horticulture, kitchen garden, agro-forestry, fisheries and dairy) has been established at Punjab Agricultural Uni-

versity (PAU) where on 1-hectare land (2.5 acres) economically feasible farming is practised. The gross returns from this farm were more than Rs 8 lakh and the net revenue generated was nearly Rs 5 lakh.

Further, the small and marginal farmers can opt for value addition processing and high-value crops for better returns. Gurdev Kaur, who lives near Ludhiana, formed the 'Global Self-help Group' and is earning handsomely by processing vegetables in diversified ways; the group has provided employment to many women in the area. Another young farmer, Gurbir Singh of Maholi Kalan village near Ludhiana, is earning Rs 2.5-3 lakh annually from his 3-acre land by

selling vegetables, pulses and maize under his brand 'Next Organic'. There is no dearth of such examples where revenue can be generated by innovative farmers on a small piece of land. While some are doing successful cultivation of strawberries, selling these at the premium price of about Rs 350 per kg, others have earned a lot from the cultivation of bell pepper. Another innovative farmer, Sultan Singh of Khaira Kalan village, is reaping rich dividends from fig cultivation that he started in 2018. He is earning Rs 2 lakh per acre.

Commercial beekeeping and mushroom production are other options for small and marginal farmers to increase their income. Gurdaspur's Kaushal Singh tried his luck at the processing of sugarcane for value addition in *gur*-making. He is earning revenue of about Rs 2 lakh per acre by selling his produce directly to the consumers under his organic brand and does direct marketing.

While farmers' efforts and the will to adopt new technologies are of paramount importance, it is expected from the government that the policies are made and executed so that marketing of the produce is facilitated. Further, it is high time the government ensures guaranteed purchase of high-value crops at the MSP to encourage farmers to shift from the wheat-paddy cycle. Finally, attention must be paid to the recommendations made by various expert committees on agriculture, such as those led by Dr MS Swaminathan and Dr SS Johl, to improve the lot of the peasantry and other stakeholders.

Gursharan Singh is former Dean, PG Studies, and MS Toor is retired Professor of Economics, PAU, Ludhiana

Centre must review agri output, export policies

COMMENTARY

G CHANDRASHEKHAR

Mumbai, August 4

Despite pandemic-related restrictions and supply chain disruptions, the country's agricultural exports touched a new high of \$41.26 billion in 2020-21 — an increase of about 17 per cent from \$35.15 billion in the previous year.

Coming at a challenging time, this record deserves to be recognised and commended. There is a smug feeling within government circles over India breaking into the top ten of the world's agricultural commodities exporting nations. While we must enjoy the moment and compliment those who worked towards this achievement, a closer scrutiny of the export data is revealing, and somewhat disconcerting.

Marine product export — the highest foreign exchange earner among agri-goods, de-

was a tad lower in 2020-21 at \$3.17 billion (\$3.20 billion).

Rice (basmati and non-basmati) and sugar are big gainers in export. Rice export tops the chart in 2020-21 with cumulative earning of \$8.82 billion (\$6.40 billion). The other stellar performer, sugar, brought \$2.79 billion (\$1.96 billion).

Water-intensive crops

Without taking away any credit, two points deserve attention. The rupee actually depreciated by about 5 per cent in 2020-21 compared with the previous year. Obviously, a weaker rupee has helped in boosting export earnings.

But, a significant matter of national concern is the large increase in rice and sugar export. The two crops (paddy and sugarcane) are water-intensive. By exporting

clear production surplus to the extent of 5-6 million tonnes. This is sought to be exported so that domestic prices are not depressed. Far from being competitive, our sugar exports are subsidised, something that has attracted international attention. There is a complaint against India's subsidised sugar export at the World Trade Organization.

Ethanol holds the key

In addition to export, to manage the surplus, ethanol production and blending with petrol is sought to be promoted. In this case, we are converting food into fuel. Why do we produce excess sugar and then struggle to cope with the surplus through subsidised export and fuel production?

Very simply, there is a strong case — as recommended by NITI Aayog — for reducing sug-

efficiently. Rice production and export is intriguing. Paddy is cultivated on approximately 45-47 million hectares in two seasons. According to government statistics, our rice production touched a record 120 mt in 2020-21.

While promoting premium Basmati rice export is understandable, production and management of humongous quantities of other rice varieties deserves a strategic policy approach given the country's poor nutrition status. Like sugar, the case for reducing the area under non-Basmati rice (paddy) is compelling to the extent that we generate only a modest surplus, and not struggle to deal with massive surpluses.

Export of water-intensive commodities like rice and sugar actually flies in the face of well known sustainability principles. Our agricultural production and export policies deserve a serious review.



BUSINESS LINE , CHENNAI 09 AUGUST 2021

Commodity prices may rise on new disruptions to trade

Dry bulk shipping rates have doubled, container rates are up 79%, says Fitch Solutions



Freight rates are driven by robust demand for ores, metals and agricultural goods to China

SUBRAMANI RA MANCOMBU
Chennai, August 8

With shipping costs soaring over the last few months, global trade cannot afford any new disruptions since it could lead to supply chains being affected with prices of agricultural products and metals rising further.

This is particularly valid on the heels of fears that there could be a third Covid wave due to the Delta variant of the Coronavirus, which is spreading fast in some countries including the US and Europe.

"Given how tight these shipping lines are, any new disruption to trade could pose upside risks to agricultural and metal prices," said a Fitch Solutions Country Risk and Industry Research (FSCRIR) commentary.

Chaotic conditions

The world's biggest container company, A.P. Moller Maersk, in a statement on Monday said chaotic conditions in the global supply chain have pushed freight rates higher.

On Friday, Maersk said its income for the June quarter before interest, tax, depreciation and amortisation was \$5.1 billion, up 200 per cent from the same period a year ago.

Fitch Solutions said shipping costs have continued to

cent cheaper than shipping by containers. "Earlier, only two or three persons would have come together to engage a bulk vessel. Now, 20-30 shippers come together to hire a bulk vessel, and each one ships small parcels," he said.

Depleted inventory

Fitch Solutions said the ongoing tightness in the shipping sector was due to a number of factors, including a rebound in manufacturing in China and developed markets, amidst the economic reopening and recovery.

Many companies were trying to rebuild their inventories after production cuts last year. Continued strong demand for consumer goods has resulted in depleted inventory, the agency said.

"Indeed, consumption patterns have clearly shifted amidst multiple lockdowns, towards buying physical goods, and away from services, leading to a boom in e-commerce. Adding to these trends, port and shipping activity has remained constrained by Covid-19 waves and the enforcement of stricter health and safety protocols, which has led to port congestion and has clearly slowed down loading and processing times," it said.

But Fitch Solutions held out hope for the situation to stabilise in the months to come. "We

"Skyrocketing freight costs were affecting businesses, which did not have ample inventory to tide over the current situation," the trader added.

The trader said shipping companies were trying to make good the losses they had accumulated earlier. Besides, China was taking away most empty containers either to export or get supplies.

China growth to taper off

Each business saw shipping costs have continued to increase sharply in recent months with container shipping rates skyrocketing. Rates have increased 79 per cent since the beginning of the year for a 40-foot box.

"Prices of dry bulk shipping (measured by the Baltic Exchange Dry Index) have also risen significantly and are now at their highest level since 2009, with the Baltic Exchange Dry Index having risen by 104 per cent in the year-to-date," it said.

US-China rates up 500%
According to freight-tracking firm Freightos, rates from the US to China have topped a re-

port of get supplies. **'Unable to absorb costs'**
"Freight rates have doubled in the last few months. Trade in containers has been ruled out as consumers are unable to absorb the costs," said Vidya Sagar VR, Director, Bulk Logix.

Delhi-based trade analyst S Chandrasekaran said the high freight rates were affecting demand. "This is an unavoidable situation in view of the rush for containers. But this could lead to payment problems since higher freight puts the trade at a disadvantage," he said.

Sagar said most shippers were now looking at bulk shipping since it is at least 30 per

cent cheaper than shipping by containers. "Earlier, only two or three persons would have come together to engage a bulk vessel. Now, 20-30 shippers come together to hire a bulk vessel, and each one ships small parcels," he said.

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BUSINESS LINE HYDERABAD, 11/8/2021

Telangana to call for Expression for Interest for Better Farming project

Ties up with World Economic Forum for 5 year project

KV KURMANATH

Hyderabad, August 10

The Telangana government will soon call for Expression for Interest (EOIs) in the next one-two weeks for the implementation of a five-year Saagu Baagu (Better Farming) project by deploying technology solutions.

The government is looking for partners to prove and establish transformation potential of innovative technological solutions along the value chain in the primary sector.

The Saagu Baagu Project is being led by the Agriculture Department in associ-

ation with Professor Jayashankar of Telangana State Agricultural University (PJTSAU) IT Department and the World Economic Forum.

Crops covered

The project will cover crops such as cotton, chilli and turmeric for the kharif season and groundnut, bengal gram, and paddy for the rabi season.

"The project shall be implemented on the principle - 'Think Big, Start Small, Scale Fast'," a senior government official said.

This is an outcome of the AI4AI (AI for Agriculture Innovation) initiative

launched by the government a year ago. The initiative resulted in the identification of nine frameworks and 30 use cases along four areas of the agriculture value chain - Crop Planning, Smart Farming, Farmgate-to-Fork and Data-driven Agriculture.

The State government tied up with C4IR India, World Economic Forum and a few ecosystem players, including start-ups to tap emerging technologies for making a difference to the agriculture sector.

The project is aimed at covering one lakh farmers over four crop cycles and build a scalable model.

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BUSINESS LINE , CHENNAI 09 AUGUST 2021

Kharif sowing recovers on significant rise in rainfall

Acreege is still down 2%; Rice was planted over 310 lh till Friday

OUR BUREAU

New Delhi, August 8

Significant improvement in the seasonal rainfall after a prolonged lull in many parts of the country has helped push up the area under the kharif crops. As a result the drop in planting as compared to same period last year came down to around 2 per cent.

According to the weekly sowing data released by the Agriculture Ministry on Friday, farmers have planted kharif crops of over 934 lakh hectares (lh) as compared to 956 lh sown in the corresponding week last kharif season.

Rice, which accounted for the third of the total sown area, was planted over 310 lh till Friday, nearly 3 per

Kharif sowing			
Crop	Area sown		% diff over 2020
	2021	2020	
Rice	310.17	318.88	-2.73
Pulses	119.54	117.36	1.85
Arhar	44.41	42.12	5.44
Urdbean	33.90	34.40	-1.45
Moongbean	30.24	31.04	-2.59
Coarse cereals	153.05	156.29	-2.07
Jowar	12.30	12.95	-5.00
Bajra	56.51	61.02	-7.38
Maize	76.04	73.81	3.01
Oilseeds	173.50	179.71	-3.46
Groundnut	44.40	47.08	-5.69
Soybean	115.14	118.08	-2.49
Sesamum	10.84	11.36	-4.60
Sugarcane	54.46	53.66	1.49
Cotton	116.17	123.64	-6.04
Total	933.88	956.47	-2.36

Source: Agriculture Ministry



cent lower than 319 lh in the same week last year. While many traditionally rice-growing States such as Bihar, Chhattisgarh, Jharkhand reported a dip in rice planting, the area is marginally higher in Assam. Madhya Pradesh and

Maharashtra as compared to same week in the previous year.

The area under pulses, on the other hand, is up by 2 per cent thanks mainly due to an increase in the area under arhar, which is 5 per cent more than the corres-

ponding week last year. The pulses have planted over 120 lh as compared to nearly 117 lh last year. The drop is mainly due to a marginal shrink in area under moong and urad crops.

CRISIL report

Poor rains in Madhya Pradesh have affected the oilseeds acreage. The area under oilseeds is down by nearly 3.5 per cent to 173.5 lh as compared to same week last year. According to CRISIL report on Friday, the dry spell up to mid-July in Madhya Pradesh, caused damage to soybean crop due to poor germination rate.

Following the higher price of soybean seeds, farmers have preferred 'direct seeded rice' over soybean as monsoon got better subsequently, the CRISIL report said.

As per the Agriculture Ministry, Madhya Pradesh has planted soybean only

over 51.67 lh as against 57.8 lh in the corresponding week last year. Maharashtra on the other hand, planted soybean over an additional 7 per cent area.

Another crop that registered significant drop in planting as compared to same week last year was cotton, which is planted over 116 lh as compared to nearly 124 lh in the same period last year.

There is also a marginal per cent decrease in coarse cereals acreage at 153 lh even though maize, which accounted for half the coarse cereals area, registered 3 per cent increase to 76 lh.

According to India Meteorological Department the country as a whole received 449 millimetres of rains during the first half of the monsoon season, bringing down the deficit to just 1 per cent as compared to the long period average of 452 mm.

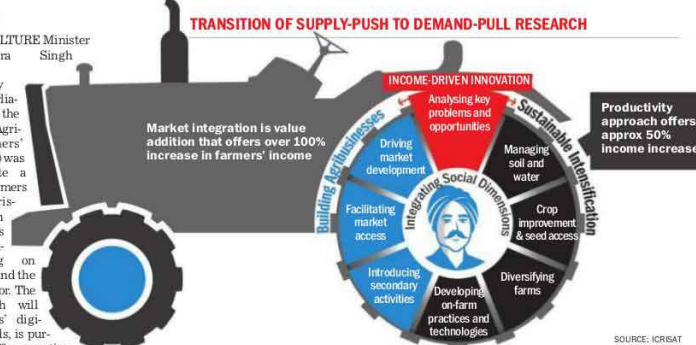
Digital divide can make exercise self-defeating

MANJITS KANG

Merely the creation of a national database is not going to double or enhance farmers' income. They should be incentivised to diversify away from the rice-wheat monoculture toward high-value crops. Besides, the Swaminathan Commission's recommendations regarding MSP should be implemented. Worryingly, crop diversification has remained elusive despite the fact that water aquifers in the food-bowl states are running dry due to the rice-wheat monoculture.

AGRICULTURE Minister Narendra Singh Tomar recently informed Parliament that the Department of Agriculture & Farmers' Welfare (DoAFW) was going to create a National Farmers Database or 'Agristack', a collection of technologies and digital databases focusing on India's farmers and the agricultural sector. The database, which will include farmers' digitised land records, is purported to help offer proactive and personalised services to farmers, increase their income and improve the efficiency of the agriculture sector. The Central Government had formed the Committee on Doubling Farmers' Income in 2016; it submitted its 14-volume report in 2018. The creation of a dynamic farmers' database is mentioned in one of the volumes. The DoAFW had floated the India Digital Ecosystem of Agriculture (IDEA), which was to seek feedback from parties concerned. Now, 'Proofs of Concept' (PoCs) based on data from the federated farmers' database for certain chosen areas have been invited. If any of the PoCs (pilot) turns out to be beneficial for the farmers, the database is expected to be scaled up to the national level. Farmers and some farm organisations have raised objections to IDEA, as there is lack of farmer representation in the existing task force. They are equating

TRANSITION OF SUPPLY-PUSH TO DEMAND-PULL RESEARCH



this process to the way the three farm laws were introduced last year, with farmers not being consulted. A proactive approach is always better than a reactive one.

Another objection is regarding the linking of the financing of the states by the Central Government to the implementation of the project. There are other concerns as well, for example, privacy of the farmers' personal details in the database.

The DoAFW should consider the digital divide between rural and urban areas. According to a survey conducted by the National Sample Survey Office (NSSO), between July 2017 and June 2018, just 4.4% rural households had a computer against 14.4% in an urban area. Only 14.9% rural households had access to the Internet against 42% households in urban areas. Not all farmers have a smartphone. Thus, if launched, most farmers will not be able to enjoy the purported benefits of the national database.

Since one of the purposes of the proposed database is to double farmers' income, I wish to comment on the report prepared by the Committee on Doubling Farmers' Income (DFI).

Ashok Dilwai, chairman of the committee, introducing the report, wrote on the website of the Department of Agriculture & Farmers' Welfare: "Dear Citizens, I am happy to share with you the Report of the 'Committee on Doubling (sic) Farmer's Income' prepared in 14 Volumes... The above volumes may be downloaded for review by all interested stakeholders."

With great optimisation of an Income Revolution for India's farmers..."

Volume 9 has four sub-volumes. The smallest volume is No. 10 (Risk Management in Agriculture; 124 pages) and the largest is No. 8D (Production Enhancement through Productivity Gains; 333 pages). Altogether, the 14 volumes

have 3,156 single-spaced pages. The biggest stakeholders are the farmers. How can anyone expect farmers to read and digest information from 3,156 pages full of bureaucratic jargon? Let alone farmers, I doubt if many agricultural scientists and policy-makers have read all these volumes.

In Volume 12 ('Science for Doubling Farmers' Income'), the committee stated, "At the national level, the priority areas to target doubling of farmers' income, though Science and Technology could be:

a. Farmers' database — as recommended in Volume 13, to build a dynamic database and ensure targeted and efficient delivery of support to farmers, and to assist specialised extension services.
b. Credit availability — to provide greater coverage under Kisan Credit Cards, including crops, fishers and livestock farmers, and universal access to post-

harvest pledge loans.
c. Market efficiency — to provide market intelligence through demand & price forecasting.

d. Extension system — to standardise information, integration of effort among stakeholders and maximise coverage to reach all farmers.

e. Resource use efficiency — specifically to improve soil and water management.

f. Sustainability and productivity gains — to improve yields and broad-base the production while suiting regional ecological strengths."

The intriguing phrase in the above statement is "could be," indicating that the committee was not certain whether the six priority areas they listed would do the miracle of doubling farmers' income by 2022. How can such a programme succeed when the committee was so tentative in proposing the six priority areas?

The committee listed the following five as essential 'pillars' for doubling farmers' income and sustaining a steady income growth in the long run: increasing productivity as a route to higher production; reduced cost of production/cultivation; optimal monetisation of the produce; sustainable production technology; risk negotiation all along the agricultural value chain. You don't need a committee to come up with such obvious interventions.

Agricultural scientists have continually pointed out that crop productivity has reached a plateau for various reasons, especially in the food-bowl states of Punjab, Haryana and western UP where, encouraged by governmental policies, the rice-wheat monoculture has been prevalent for the past 50 years. While costs of agri-

cultural inputs have been increasing significantly year after year, farmers have been getting only incremental increases in the minimum support price (MSP) for the two crops. The Swaminathan Commission made a modest recommendation of providing MSP of 50% over and above the total input costs incurred by the farmer. This has not been done. In addition, sorely needed crop diversification has remained elusive despite the fact that the water aquifers in the food-bowl states are running dry because of the rice-wheat monoculture.

Merely the creation of a national database is not going to double or enhance farmers' income. Here are some suggestions to enhance their income:

- Incentivise farmers to diversify away from the rice-wheat monoculture toward high-value crops
- Provide accurate weather forecast
- Make available 'weather-based crop insurance', whereby farmers are compensated on the basis of unfavourable weather conditions (extreme temperature, floods, drought, hailstorm)
- Incentivise farmers to form Farmer-Producer Organisation (FPO)-type of cooperatives.
- Purchase crops other than rice and wheat at MSP
- Help farmers enhance their 'staying power' so that they won't have to sell their produce all at once
- Prepare agriculture for unpredictable climate change
- Incentivise farmers not to burn paddy straw in the field
- Implement Swaminathan Commission's recommendations regarding MSP.

The author is former VC, PAU, Ludhiana, and Adjunct Professor, Kansas State University

SINNESS LINE , CHENNAI 10 AUGUST 20:

NACL net soars 2.7 times in Q1 to ₹14.31 crore

OUR BUREAU

Hyderabad, August 9

NACL, formerly known as Nagarjuna Agrichem, has reported a net profit of ₹14.31 crore in the quarter ended June 30, 2021, against ₹5.36 crore in the corresponding previous period.

The revenue from operations stood at ₹324.68 crore in the quarter against ₹252 crore in the comparable quarter last year.

The company declared a first interim dividend of ₹0.10 a share (₹1 each) for the financial year 2021-22.

"The results for the quarter were driven by strong performance in sales and manufacturing operations. The second wave of the pandemic caused considerable disruption to the normal functioning of the organisation," Pavan Kumar, Managing Director and Chief Executive Officer, NACL, said.

"The company is making significant investments in its manufacturing capacities in anticipation of an uptick in growth and demand. The outlook for the second quarter is positive with good order book for technicals and formulations," he said

"Despite the logistics hurdles across the world, in general, and to the US and Europe, in particular, export business grew significantly during the quarter," a company statement said on Monday.

"The increased fuel costs are impacting some input materials and logistics costs," it said.

TELANGANA TODAY HYDERABAD, 11/8/2021

Govt to use AI for innovation in farming

'Saagu Baagu to facilitate improvement in lives of farmers'

STATE BUREAU
Hyderabad

The State government came up with the Saagu Baagu (Agriculture-Advancement) project to transform the agriculture sector by deploying emerging technologies in a scalable, inclusive and sustainable way. This project was being taken up as part of the AI4AI initiative, (Artificial Intelligence for Agriculture Innovation) launched by IT Minister KT Rama Rao in August last.

The AI4AI initiative resulted in the identification of nine frameworks and 30 use cases (a methodology used in analysis to identify, clarify and organise system requirements) along with four key parts of the agriculture value chain, including

Crop Planning, Smart Farming, Farmgate-to-Fork and Data-driven Agriculture.

Now, under the Saagu Baagu, the aim is to influence at least one lakh farmers covering four crop cycles and establish the required infrastructure for scaling it up across the State. The Project is being led by the Agriculture Department in association with PJTSAU, IIT&C Department and World Economic Forum. IT Principal Secretary Jayesh Ranjan said "In order to truly improve the lives of farmers, adoption of technology is the only sustainable approach and the same will be facilitated under Saagu Baagu Project"

To this effect, the State government prepared an Expression of Interest,

which will be released in a couple of weeks. The objective of the EoI is to get suitable partners and their consortia of leading Agri ecosystem players on board to establish innovative solutions along the Agri value chain. The project shall be implemented on the principle - "Think Big, Start Small, Scale Fast".

While the overall Saagu Baagu project is planned to be a five-year focused effort, the role of PIPs on board under the EoI, will be confined to two years, covering three to four crop cycles across multiple districts of select priority crops. Accordingly, it will be for cotton, chill and turmeric crops during Kharif season and for groundnut, Bengal gram and paddy during Rabi season.

THE HINDU HYDERABAD, 11/8/2021

Cabinet panel moots demo farms in all districts

Call to establish large number of food processing units

SPECIAL CORRESPONDENT
HYDERABAD

Minister for IT, Industries and Municipal Administration K.T. Rama Rao stated that agriculture sector in TS is making rapid strides towards comprehensive growth from the crisis at the time of State formation.

Speaking at a meeting of the Cabinet Sub-Committee on Agriculture on Tuesday, he said four revolutions in agriculture and allied sectors were taking place with second green revolution (agriculture) starting with pro-farmer policies and commendable work of the department. Blue revolution was on with development of fisheries, pink revolution

with sheep scheme and white revolution with dairy sector growth.

Citing an example of transformation with the help of agriculture, Mr. Rama Rao said Ellanthakunta village in Rajanna-Sircilla district was a perennially drought-prone area but not farmers there were harvesting riches with provision of irrigation and free power. He stated that it was the agriculture sector that had the capacity change the future of the State as about 2 crore people in the State were depending directly or indirectly on agriculture.

He suggested setting up food processing industries on a large scale to turn agri-

culture into an industry. He also mooted that the sub-committee meet Prof. M.S. Swaminathan, Jayati Ghosh, P. Sainath, Subhash Palekar to make the farm sector remunerative and attractive. A team should also visit agriculture museum at Iowa in USA.

He suggested establishment of demonstration farmers in 32 districts in 50 to 100 acre area. Asking the Agriculture Department to make best use of technology, Mr. KTR told them to examine giving phablets for timely information on crop management and encourage the youth to innovate farmer-friendly technologies, including use of drones.

HANS INDIA BIZZ BUZZ 16/8/2021

Shrinking farm sizes a challenge in India

Govt to focus on reforms and programmes for small farmers

NEW DELHI

STRESSING that shrinking farm sizes is a challenge, Prime Minister Narendra Modi on Sunday said there is a need to increase the collective power of small farmers who account for more than 80 per cent of the farming community with new facilities in the coming years. Small farmers have less than two hectares of land. Additionally, farm holdings are getting smaller and smaller in villages with rise in population and division in families, he said during his Independence Day speech. Unlike the previous regime, the current government is bringing farm reforms and programmes with focus on small farmers, he said, adding that schemes like PM-KISAN and Fasal Bima Yojana will strengthen these cultivators. Asserting that his dream is to make small farmers the pride of the country, the Prime Minister said, "In the coming years, we will have to increase the collective power of the small farmers of the country. They have to be given new facilities." The government will run a campaign to set up warehouse facilities at the block level, he said. "Chota Kisan bane desh ki shaan! It is our dream, our mantra that small farmers become the pride of the country," he asserted.

Stressing on the need to focus on major challenges facing the agriculture sector, the Prime Minister said, "One challenge is the shrinking farm sizes in villages."

More than 80 per cent of the farmers in the country have less than two hectares of land. But the earlier policies did not focus on small farmers, he said. "Now, keeping these farmers in mind, farm policies and reforms are being made," he said, highlighting the programmes being implemented for empowering small farmers. Be it reforms in Fasal Bima Yojana, increasing the minimum support price (MSP) by 1.5 times (the cost of production), linking farmers with Kisan Credit Card (KCC) for cheaper farm loans, taking solar power schemes till farm land or setting up of Farmer Producers Organisations (FPOs) -- all these efforts will strengthen small farmers, he added.



BUSINESS LINE CHENNAI, 16/8/2021

Driving a 2nd green revolution via agri-biotech

Encouraging GM crops is a sure shot to doubling farmers' incomes and relieving rural distress

SANJIV LAL

Indian agriculture has come a long way since the country saw the Green Revolution in the late Sixties, which saved the country from food shortages and severe farming distress. The science behind the revolution is what made all the difference. Today, India is once again at the cross-roads, though it's on a much stronger wicket than it was five decades ago.

India is today a leading producer of a variety of crops. They include rice, wheat, cotton, sugarcane and an impressive list of fruits and vegetables. But, in terms of yield or output per unit of land, we lag behind countries that are major cultivators of food crops.

A variety of reasons affect crop yields include climate conditions, access to high-quality farm inputs, mechanisation, access to capital and a good knowledge of the latest farming techniques. But, none of these will mean much if the seeds that go into our lands are not of the best quality or do not have resistance to many of the pests and dis-

eases. Agri-biotech can provide a solution to this challenge. The most popular and commonly-sold product is the genetically modified seeds. These crops are resistant to several common pests and diseases. They also help in producing high quality yield that ultimately lead to better prices.

Simply put, transgenic or GM seeds are nothing but seeds which have some attributes added by introducing genes extracted from another species. There are any number of attributes that can be added to a seed to improve its taste, colour, quality, nutrition value and perhaps, most importantly, make them resistant to common diseases or ward off pests such as the bollworm that attack the cotton plants. Another critical need for future – climate resilient crops – could also be attempted through GM technology.

Benefits of GM tech

In India the benefits of GM technology were almost immediate and, very impressive. Ever since we opened our farm sector to the genetically-modified cotton (Bt Cot-



Bt cotton Rising yields VV KRISHNAN

ton) more recently, the country emerged as one of the major producers of this cash crop and in less than four or five years, became a net exporter. The benefits enjoyed by the cotton farmers have not spread to other crops. This challenge is perhaps best exemplified by the fact that a major part of China's maize imports come from the North and South American countries. Meanwhile, as China's next-door neighbour, India is unable to profit from

these opportunities or have a competitive price because of the current levels of productivity.

So, what is holding us back from investing more in agri-biotech and emerge as a world leader in agriculture? Indian agriculture is not averse to science, if that were true, we wouldn't be enjoying the fruits of the Green Revolution today. Saying we have not kept pace with the adoption of science in agriculture would be closer to the truth. For instance, gene edited crops have shown great promise and are being cultivated in other parts of the world for benefits like quality of produce. This tool provides a route to improve crop attributes by minor modifications to the native genome without introducing any genetic material from another species.

Encouraging home-grown technologies as well and support them with the necessary regulatory steps without any compromise on the science and safety is vital for 'Doubling farmers' income'. Technology development investments can also be encouraged by having a good mech-

anism to capture the value of the investment. This will further motivate all technology developers to take interest in crops that are relevant to India and using technologies for which there is a clear regulatory framework.

GM crop technologies undergo several years of testing for their trait efficacy, safety and overall performance enhancement of the crop and the testing regime is better than how conventionally developed varieties as well as products of mutation breeding. We should have faith in all the good science in place for evaluating these technologies and what emerges as safe and good for the crop should be made available to the farming community. Farmers should be allowed to choose what is best for them.

Unless the farmers stand to gain in the long run, nobody wins. This is undoubtedly one objective that can bring all stakeholders, including regulators, farmers' lobby, activists and investors closer to create an atmosphere of trust.

The writer is MD & CEO, Rallis India Ltd

TOP STORY N.D 12/8/2021

Agriculture sector records new business registration growth at 103% in FY21

Mumbai: The agriculture sector recorded the highest 103 per cent growth in new business registrations at 12,368 in FY2021, compared to 6,107 in the previous fiscal, according to a paper released by Dun & Bradstreet on Wednesday.

The white paper on 'Business Dynamism in India' showed that the manufacturing sector witnessed 39,539 registrations in FY21 compared to 26,406 in FY20, a growth of 50 per cent.

In FY21, a total of 1,95,880 businesses were registered, which is a record high, it said.

"While the agriculture sector observed 12,368 registrations in FY21 compared to 6,107 in FY20, the services sector also fared well with the highest number of registrations at 83,079 in FY21 and witnessed a growth rate of 14 per cent," the paper showed.

The birth rate of new businesses showed a healthy pace of growth from 7.8 per cent in FY16 to 10.2 per cent in

The white paper on 'Business Dynamism in India' showed that the manufacturing sector witnessed 39,539 registrations in FY21 compared to 26,406 in FY20, a growth of 50 per cent.

FY20 and further to 11.6 per cent in FY21, despite the pandemic and subsequent waves of lockdown.

The paper showed that subsectors such as agriculture production (crops), food and kindred products manufacturing, wholesale of non-durable goods, chemicals manufacturing, social services, educational services, and computer-related services gained significant new registrations. Sub-sectors such as wholesale trade of durable goods, transportation services, repair services, restaurants, bars, etc. witnessed a significant contraction in business registrations during the year.



The share of businesses being registered outside mainstream locations such as Mumbai, New Delhi, Bengaluru, and Chennai is increasing. The top 10 cities accounted only for 42 per cent of new business registrations in FY21 compared to 55 per cent in FY17.

"While the pandemic changed the business landscape dramatically, it pre-

sented itself as an opportunity, and many businesses capitalised on the evolving trends, leading to an increase in business registrations. About 1,95,880 businesses were registered in FY21, a record high," Dun & Bradstreet Managing Director & CEO (India) Avinash Gupta said.

Most of the newly registered businesses are con-

centrated in sectors that witnessed a pandemic-induced spike in demand and 96 per cent of the newly registered business had a paid-up capital of up to Rs 10 lakh, he said.

However, Dun & Bradstreet's research reveals that the historical survival rates of businesses that fall in this category are low, Gupta added.

"Hence, businesses that partner with such ventures need to continuously monitor their portfolio and establish red flag alerts to protect their capital," he said.

The firm's Global Chief Economist Arun Singh said the pandemic has significantly altered how businesses conduct commerce.

As a result, companies in India are becoming more dynamic, and competitive, but the impact is varied. Some sectors such as manufacturing of food and kindred products, computer-related services, educational services, etc. have witnessed a healthy growth in business registrations, Singh added.

Drones, AI set to revolutionise farm operations

The emerging technologies to improve net profit and reduce input cost

P. SAMUEL JONATHAN
GUNTUR

At a time when agriculture is affected by low productivity, adverse monsoon and climate change, the use of drones and Artificial Intelligence (AI) in farm operations signals a revolutionary change.

Farmers in Andhra Pradesh can now look forward to tapping these emerging technologies, thanks to the groundbreaking efforts of the scientists of Acharya N.G. Ranga Agricultural University (ANGRAU).

Responding to a call from the university's Vice-Chancellor A. Vishnuvardhana Reddy, the scientists have assembled drones and developed Standard Operating Procedure (SOP) for deploying them for spraying in extents where nine commercial crops - rice, cotton, maize, black gram, red gram, bengal gram, groundnut, sorghum and soyabean - are cultivated.

"While developing the drone technology suited to



ANGRAU Vice Chancellor A. Vishnuvardhana Reddy inspecting a drone assembled at the university before field trials.

■ T. VIJAYA KUMAR

the local conditions, we have two things in mind -improving the net profit of crops and reducing the input cost. We are also staring at an acute shortage of labour. Farm mechanisation is still in a nascent stage. Early interventions such as a tractor have helped farmers so much and changed the way farming is done. Drones are the future of

farming," Dr. Vishnuvardhana Reddy told *The Hindu*.

The drone technology is being developed under the AP Sensors and Smart Applications Research in Agriculture (APSARA).

Model study

"A model study by the university has revealed that unmanned spraying of pesticides and plant nutrients

has saved 90% of the time, reduced 25-30% of pesticide consumption, and saved 90% of water used for pesticide spaying, besides saving the health and lives of the farmers," Dr. Vishnuvardhana Reddy said.

"Drones can ensure effective, efficient, timely, and uniform spraying, and can easily reach inaccessible field locations," he said.

The advantage drone spraying has over the manned motorised backpacker spraying is that it flies very much within the same altitude and zones where air traffic and other weather parameters do not influence its safety and flight.

"The control of drone lies with the pilot and reduces the danger to humans or animals. As long it is flown within the crop micro climatic zone of two metres from the canopy, it will not cause any explosion or damage to drone or human beings" Dr. Vishnuvardhana Reddy said.

THE HINDU VISAKHAPATNAM, 18/8/2021

Make fertilizers and pesticides available to farmers, Collector tells officials

'Ensure online registration of crops'

SPECIAL CORRESPONDENT
VISAKHAPATNAM

District Collector A. Mallikarjuna has directed the officials to make fertilizers and pesticides available to farmers through Rythu Bharosa Kendras (RBKs) and keep them informed from time-to-

time on the scanty rainfall situation and crop status.

At a review meeting with officials of agriculture and allied departments on Tuesday, the Collector asked the officials to ensure online registration of crops (e-Crop). He called upon them to educate farmers on modern cropping methods.

The Collector reviewed the progress in the fields of Animal Husbandry, Horticul-

ture, Micro Irrigation and Fisheries.

At a separate meeting with the housing officials, he sought immediate grounding of pending works under Jagananna Housing. He reviewed the progress of various works like provision of internal roads, borewells, water supply and power in the layouts. The Housing Inspectors should conduct field level inspections from

time-to-time and motivate beneficiaries to go for construction early to ensure speedy completion of the layouts, he said. He called upon the officials to ensure completion of the proposals for houses in rural areas by the weekend. Indents for procurement of materials like sand, iron and cement should be placed before hand after making an assessment of the requirements.

BUSINESS LINE , CHENNAI 15 AUGUST 2021

Agriculture at the cusp of change

Start-ups are leveraging technology to solve age-old problems

• Subramani Ra Mancombu

Over the last 75 years, Indian agriculture has made rapid strides. From a meagre 55 million tonnes, production of foodgrains has increased to a record 308.65 million tonnes last season (July 2020-June 2021).

Production of pulses, coarse cereals, natural fibres, sugarcane, vegetables and fruits have all increased manifold since Independence.

During the 1960s, India faced a shortage of foodgrains. It came the Green Revolution which made the country self-sufficient in foodgrains by the year 2010. Things have gone further with India now being among the top 10 agricultural products exporters.

But these milestones are nothing considering the developments that are taking place, mostly under the radar, in the sector.

It is now set to take-off in a way that we should not be surprised if reverse migration happens towards the rural areas. There are ample signs that the process has just begun.

Making farmers richer

The Green Revolution led to many problems with a good amount of arable lands turning alkaline or saline. Soil fertility has been affected, groundwater levels have dropped, and new pests and diseases have cropped-up.

India introduced genetically modified crops in the form of cotton but has not progressed any further with the introduction of consumable crops such as brinjal being opposed tooth and nail.

A report by the Committee on "Doubling farmers income" said despite the production surge, 22.5 per cent



Bumper harvest Production of pulses, coarse cereals, natural fibres, sugarcane, vegetables and fruits have all increased manifold since Independence

of the farmers in the country are below the poverty line (BPL).

The report said that "land is a powerful asset and that such an asset owning class of citizens has remained poor is a paradox".

Attracting entrepreneurs

Start-ups now view agriculture as a sunrise sector with agri tech firms seeing immense scope in playing a big role in its development. These together have begun to attract the required investment in the sector that will be the key drivers in the days to come.

One of the key developments in Indian agriculture sector is precise farming. Quite a few startups have taken interest in this field, which now focuses on how farmers should go about planting their crop.

These firms mainly use apps to communicate with the farmers on the best time to plant their crop, irrigate it and

apply nutrients or fertilisers. A couple of firms are now alerting farmers at least 15 days in advance.

Then, there are startups that deploy machine learning (ML) and the Internet of Things (IoT) by taking a picture of a plant's leaf which a farmer suspects to have been infected, ML and IoT can provide a whole lot of information on the problem and how to tackle it.

A few other start-ups now use technology to inform growers on the quality of their crop and the price it could command. Some now extend their services to the farm gate to either store their crops or even preserve them in cold rooms that can be ready in a few hours.

There are already reports of how the younger generation in the field of IT is taking interest in agriculture and is making good profits using technology. This is just the start and there are more cards going by the pace of how the trend is picking up.

DELHI GOVT TO ASSESS CITY'S AGRI SECTOR

Survey to focus on 'condition' of farmers

SOURAV ROY BARMAN
NEW DELHI, AUGUST 14

THE DELHI government has planned a study of the city's agriculture sector to gain insights on the expenditure and income from cultivation of major crops, find out the "actual condition" of farmers, and extend awareness among them on minimum support price (MSP).

The study will be carried out by a third-party agency under the supervision of the Planning Department, documents stated. The agency will be chosen through a bidding process from among ones empanelled with NITI Aayog.

The "Comprehensive Research Study on Pattern of Farming and to Assess the Costing and Income from Cultivation of Major Crops in Delhi" is aimed at knowing the major crops being "grown along with the grade and quality."

It will also seek to find out the average yield of various crops, main channels for sale of the farm produce, price realization of the last two years for both kharif and rabi crops, and the share of farmers who till land owned by others.

According to the 2011 Census, 75.1% of Delhi's area is urban and 24.9% rural. The 2016 Agriculture Census puts the total cultivable area relating to agriculture and horticulture activities at 29,000 hectares and the total number of farmers at 21,000.

"Though there are farmers in Delhi but there is no consolidated data on their actual condition," the objective of the



The survey will find out the average yield of various crops, channels for sale of the produce, price realization of the last two years for kharif and rabi crops, and the share of farmers who till land owned by others. Archive

study stated.

Data with the Development Department show that wheat, at 19,220 hectares, is grown across most of the city.

The study will cover 25 villages where 40 households will be picked from each village with "sufficient variation across location (districts) and income profile".

Apart from farming details, the surveyors will also gather data on whether the farmers hold bank accounts, kisan credit cards and insurance. They will also study as to whether the farmers are associated with any union.

To find out awareness on MSP the surveyors will attempt to understand the awareness about the agencies that purchase crops at minimum support prices. The reasons behind not selling crops at MSP range

from unavailability of procurement agency, no local purchaser, poor quality of crop and better price over MSP among others, according to the pre-survey document.

There are six APMC (Agriculture Produce Market Committee) mandis in the city. Last November, the government notified the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020, allowing trade of foodgrains and poultry outside the premises of APMC mandis.

Under the new law, the sale and purchase of products outside the mandis shall attract no market fee, cess or levy. Critics of the law fear that buyers will prefer trading outside because of the absence of any fee, which may eventually render the mandis insignificant.

BUSINESS LINE N. D. 20/8/2021

Godrej Agrovet eyes oil palm expansion

Firm proposes to bring up to 1 lakh hectares under the oil crop in 5-6 years

VISHWANATH KULKARNI

Bengaluru, August 19

Diversified agribusiness player Godrej Agrovet Ltd (GAVL) is eyeing major expansion in oil palm following the Centre's new policy announcement. The company proposes to bring up to one lakh hectares (1h) under oil palm in the next five to six years. Currently, Godrej works with farmers in Andhra Pradesh, Telangana and Tamil Nadu, where it has about 65,000 hectares under oil palm.

"We can bring around one 1h under oil palm over the next five years, provided the new policy is implemented lock, stock and barrel," said Balram Singh Yadav, CEO, Godrej Agrovet.

On Wednesday, the Centre approved ₹11,040 crore National Mission on Edible Oils - Oil Palm to reduce imports by promoting the crop in 6.5 lh and increasing the crude palm oil (CPO) output to 11.20 lakh

tonnes by 2025-26. The policy provides price assurance to the farmers through viability gap funding, besides incentivising the inputs and planting material.

'Transparent formula'

Yadav said the new policy has brought some certainty in terms of pricing and the formula is transparent. "The Centre has done its job. Now the States should also pick it up to facilitate growth," he added.

There's a big queue of farmers wanting to shift to oil palm, considering the returns it has generated this year on increase in oil prices, Yadav added.

Godrej Agrovet will also be

expanding its oil milling capacity, but it is too early to quantify the investments, he said. The company has three processing mills in Andhra Pradesh, and one each in Tamil Nadu, Goa and Mizoram with a combined processing capacity of 3,000 tonnes per hour. "Our capacity utilisation is about 80 per cent during the four-month season," Yadav said adding that company has plant capacity for the next three years. The company produced around 1.1 lakh tonnes of crude palm oil last year, which it sold to refiners.

The company is also eyeing for lands in Mizoram and the Andamans. "In a year's time we would have surveyed more States.

With these kind of benefits, lot of States will jump into the bandwagon. I have a strong view that Assam and Meghalaya will take this up very strongly," Yadav said.

Andaman is the best place for oil palm because it rains a lot, soils are very good and temperature is very similar to Indonesia and Malaysia, Yadav added.

Carbon Positive Business

On the ecological implications, Yadav said that in India oil palm is a carbon positive business, unlike in Indonesia and Malaysia, where forests are cleared killing flora and fauna to grow oil palm trees. "In India, we are con-

verting paddy lands into oil palm. Crop diversification is also happening. Soils are depleted because of monoculture. It is carbon positive and good for the environment. Can you imagine that one hectare of oil palm now has 150 trees instead of none?" he said.

Water intensive?

Oil palm is a water intensive crop, but drip is changing the game, Yadav said. "There's attractive subsidy for drip irrigation and about 80-90 per cent of our plantations have drip irrigation and the water utilisation is very judicious. In comparison, oil palm is not as water intensive as paddy and sugarcane," he said.

While official estimates indicate that oil palm is grown in about 3.5 lh, the actual area is around 2.5 lh as there has been some uprooting by farmers, he said. Palm oil production in the country is estimated at 4 lakh tonnes.

In India, Yadav said, production costs are higher due to lower productivity and oil recovery mainly due to temperat-

ure and rainfall conditions, when compared with Indonesia and Malaysia.

The average yields of fresh fruit bunches for a seven-year plantation in India is 16-17 tonnes per hectare, while it is 24-25 tonnes in Malaysia and Indonesia. In India, the oil recovery rate is 17.5 per cent, while in Malaysia and Indonesia it is 19-19.5 per cent.

The higher recovery in Malaysia and Indonesia is because the plantations are over 10 years and most of the plantations are owned by the companies and not under contract farming. "As a result, the strict management practices, which is difficult for our farmers to follow," he said.

Oil palm is grown under contract farming in India under a tri-partite arrangement between the farmer, the miller and the State. The Oil Palm Act mandates a command area system enabling farmers from a particular area to supply to a designated miller like in the case of sugar industry, prior to decontrol.

With these kind of benefits, lot of States will jump into the bandwagon. I have a strong view that Assam and Meghalaya will take this up very strongly

BALRAM SINGH YADAV
CEO, Godrej Agrovet



DHANUKA AGRITECH LIMITED: REAPING A RICH HARVEST OF FARMERS' TRUST WITH QUALITY PRODUCTS



Mr. R.G. Agarwal, Graduate (B.Com Hons) from Shriram College of Commerce in 1968, has more than 5 decades of rich experience in working for the agriculture sector in various capacities & has witnessed the 1st green revolution of India and remembers the slogan given by then Prime Minister Shri Lal Bahadur Shastri of 'Jai Jawan Jai Kisan'

SHRI R G AGARWAL
GROUP CHAIRMAN
DHANUKA AGRITECH

He is the passionate, visionary & energetic Group Chairman of the 40-year-old market leader in agrochemicals and pharma, Dhanuka Agritech Limited, Gurugram, Haryana, and he is revered as an authority on Indian agriculture and the impact of its multi-layered dynamics on the nation's socio-economic outcomes. He is vigorously working to safeguard & enrich India's food & nutrition security, health, wealth, water & environment security. As India steps into the historic 75th year of its Independence from British rule, Mr Agarwal shares with **The Week**, his vision and aspirations for the sector & company, which is listed on BSE and NSE with a turnover of Rs. 1421 Crores in the last fiscal and is set to play a critical role in empowering India's farmer community and agriculture sector.

What does the landmark moment of India's 75 years of independence mean to you?

The present government has come up with some new and bold reforms in the interest of the farmers and is also mulling on Public Private Partnership (PPP) for initiating the gigantic task of bringing about a transformative change in the agriculture sector. The best that we can do to support farmers in doubling their income is through knowledge transfer, technology support and by providing the best of new technology green chemistry pesticides for a bumper crop harvest. In this 75th year of our independence, a very ambitious 360-degree nationwide farmer extension education and awareness campaign will be launched for all the stakeholders engaged in farming to improve their yield, quality & ultimately their income which will help in increasing the export of agri-produce and especially out of 550 crops grown in our country, they can focus on high-value cash crops and horticulture crops which are in demand internationally.

After Independence, what has been the trajectory of India's agricultural growth?

When India became independent, the food production at that time was a meager 50 million tons and our food security was ship-to-mouth as we were getting low-quality red wheat under PL-480 from USA, whereas now our food production has crossed 300 million tons. Though this may look to be very promising, the fact is that our current GDP from agriculture is just 1/3rd that of China inspite of India having more land and rainfall. After investigation, we have found that the reason behind the same is the lack of new technology in agriculture, lack of quality agri-inputs & remunerative price by providing

a free & competitive market. If we have to grow and compete, then our data projections must be compared with that of the developed world which should be our bench mark, otherwise it is of no value. At the time of launch of DD Kisan channel, New Delhi in the year 2015, our Hon'ble Prime Minister Shri Narendra Modi called for increasing food-grain productivity from an average of 2 tons per hectare to 3 tons per hectare. In highly developed countries, the average crop production is much higher, ranging from 7-11 times, while China's GDP from agriculture is thrice that of India as per FAO data of 2019. However, India has crop losses to the tune of 10-30% every year as per the answer given by the Hon'ble Minister of Agriculture & Farmers' Welfare in response to various questions asked in the Parliament from August 2007 to now in 2021.

With changing times, the needs of Indian pesticide industry have also to be revisited, and now there is dire need for better reforms in the rules and regulations to align with the global best standards to give wings to the industry and make it a leading foreign exchange earner for the country.

What have been the hurdles preventing technology from reaching the farmers?

After India's independence, the Central and state governments conducted a T&V programme, where staff from the agriculture department visited farmers and trained them. But, once the food sufficiency was achieved, the programme faded out due to lack of onus and accountability on the people assigned with the task and this is the reason why India lags in growth and development unlike China, where officials are expected to face consequences for not contributing the stipulated produce of agriculture crops from the region assigned to them. I would like to quote Shri P Chidambaram, the then Union Finance Minister, who said in his budget speech in 2008 that the Agri-extension system has collapsed. We are looking for some alternative solution, which remained elusive to the farmers until 2021. The present Union government has initiated a process of profound change with the help of innovation and technology and aims to digitalize every department, including agriculture by 2024-25.

How does Dhanuka's journey look like having come this far?

In the past four decades, Dhanuka Agritech Limited has grown and established itself as a reputed research based-company in the field of agrochemicals in India. Today, the company owns three state-of-art manufacturing facilities in Rajasthan, Gujarat and J&K respectively with well-equipped Quality Testing

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