VIEW POINT AGRICULTURE ANALYSIS

Rs 15/-, Page-40

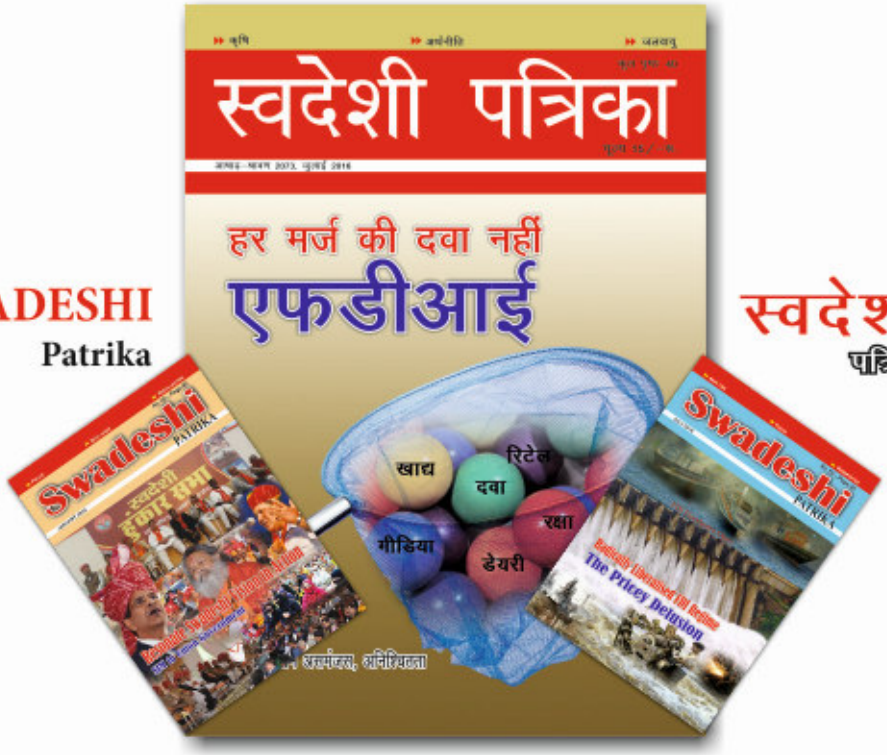
Swadeshi PATRIKA

DECEMBER 2022

Imperative of Data Sovereignty

VOICE OF SELF RELIANT INDIA

SWADESHI Patrika



स्वदेशी पत्रिका

वार्षिक सदस्यता (Annual Subscription) :	150/-
आजीवन सदस्यता (Life Membership) :	1500/-

For subscription please send payment by A/c payee Cheque/Demand Draft/Money Order in favour of 'Swadeshi Patrika' at New Delhi, or Deposit the subscription amount in

Bank of India, *A/c No.* 602510110002740,
IFSC: BKID 0006025 (Ramakrishnapuram)

Kindly write your full name and address in capital letters.
If you do not receive any issue of Swadeshi Patrika, kindly e-mail us immediately or contact **Sh. Suraj Bhardwaj (9899225926)**

पढ़ें और पढ़ायें

Vol-27, No. 12
Margshirsh-Poush 2079 December 2022

EDITOR
Ajey Bharti

ASSOCIATE-EDITOR
Dr. Phool Chand

PRINTED AND PUBLISHED BY:
Dr. Ashwani Mahajan on behalf of **Swadeshi Jagaran Samiti,** 'Dharmakshetra', Sector-8, R.K. Puram, New Delhi-22,

COVER & PAGE DESIGNING
Sudama Dixit

EDITORIAL OFFICE
'Dharmakshetra' Sector-8, Babu Genu Marg. R.K. Puram, N. D.-22
E-MAIL : swadeshipatrika@rediffmail.com
WEBSITE : **www.swadeshionline.in**

LETTERS 3

NEWS 34-38

CONTENTS

COVER STORY 6

Imperative of data sovereignty

Dr. Ashwani Mahajan

1 Cover Page
2. Cover Inside Page

08 ECONOMY
Nothing so great about free trade with Great Britain
..... **Jayant Dasgupta and Abhijit Das**

10 DISCUSSION
Chinese Protests: Reading the Tea Leaves
..... **KK Srivastava**

12 IPR
Role of IPR in Innovation Driven Economy of 21st century as relevant to India
..... **Dr. Dhanpat Ram Agarwal**

14 GM CROPS
Will Sarson Ka Saag Become Junk?
..... **Devinder Sharma**

16 GM CROPS
Save The Bees
..... **Prof. OP Chaudhary**

18 OPINION
Biden seeks to revive US-China ties
..... **Sandhya Jain**

20 FOCUS
India's White Revolution Runs into Fodder Problem
..... **Inder Shekhar Singh**

22 ISSUE
Indian health data $ 7bn treasure, AIIMS info Breach is Risky
..... **Shivaji Sarkar**

24 ANALYSIS
The impact of Sanatan Bharatiya (Hindu) Values, Culture & Tradition on our Constitution
..... **Mahadevayya Karadalli**

27 G-20
G-20 and Crypto-Currency Regulation
..... **Alok Singh**

29 PRESPECTIVE
Science of Genetic Modification
..... **Vinod Johri**

32 HISTORY
Mewar as the Locus of Guhila State (Part-VII)
..... **Prof. Nandini Kapur Sinha**

39 Back Inside Cover
40 Back Cover

GM Concerns for Farmers

Recently, the Genetic Engineering Appraisal Committee (GEAC) (a statutory body formed under the Environment Protection Act, 1986 and comes under the Environment Ministry) approved seed production before the commercial release of genetically modified (GM) mustard. The Supreme Court is already hearing the plea against GM mustard and has instructed the Government not to plant any GM mustard seed and to maintain the status quo until the completion of the hearing.

The foremost claimed advantage of GM mustard is that it will increase the yield by 25-30%. Thus, giving rise to the farmers' income and making India self-reliant in oil production, and helping in saving forex. But as seen in BT Cotton, the reverse is true. The continuous manipulation of seed costs (Bayer-Monsanto has increased the price of BT cotton by 80000% since 2002) and associated agrichemical costs like the sprinkling of herbicides such as Glufosinate only enrich MNCs and trap the farmers in debt. It is accurate for all GM crops. Also, genetically modified seeds do not create viable seed offspring by design. So every time a farmer wants to plant a new crop, he has to go to the company from which he originally bought the seeds. There are many other environmental, health, and ethical concerns as the decrease in species diversity and the displacement of native and traditional seed varieties.

The need of the hour for the Government is to promote the already available non-GM higher-yielding varieties of the seeds, to give pricing/ procurement support, and to adopt farmer-friendly import policies.

— **Kumar Gaurav,** *Samastipur, Bihar*

EDITORIAL OFFICE

SWADESHI PATRIKA

***'Dharmakshetra'*, Sector-8, Rama Krishna Puram, New Delhi-22**

■Tel. : 26184595, *E-Mail*: swadeshipatrika@rediffmail.com

For subscription please send payment by A/c payee Cheque/Demand Draft/Money Order in favour of 'Swadeshi Patrika' at New Delhi, or Deposit the subscription amount in Bank of India A/C No. 602510110002740, IFSC: BKID 0006025 (Ramakrishnapuram)

Annual Subscription	**:**	**150/-**
Life Membership	**:**	**1500/-**

Kindly write your full name and address in capital letters.

If you do not receive any issue of Swadeshi Patrika, kindly e-mail us immediately.

Quote-Unquote

It is better to live your own destiny imperfectly than to live an imitation of somebody else's life with perfection.

Dr. Mohan Bhagwat
Sarsanghchalak, RSS

Youth are the biggest strength of our country. The government is giving top most priority to ensure their talent is utilised in nation building.

Narendra Modi
Prime Minister, Bharat

Concrete steps should be taken to revive the small industry which has been affected due to imports from China. Employment promotion scheme should be introduced in rural areas so that local products are promoted and migration for employment is reduced.

Dr. Ashwani Mahajan
National Co-convenor, Swadeshi Jagran Manch

Stubble Burning: When Haryana Can Do it Why Can't Punjab?

There is a good news that this time stubble burning has come down by 26 percent in Haryana, whereas in Punjab, it continues unabated. The pictures taken by the satelites and the scientific information collected, otherwise, are all pointing to the fact that Haryana is inching towards solution of stubble burning. In the month of November 2019, the Supreme Court had lambasted the government of Haryana, Punjab and Uttar Pradesh, as to why they were not taking adequate measures to stop stubble burning. The court had also asked these state governments to give an incentive of Rs 100 per quintal of crop to encourage farmers, not to burn stubble. How much the Supreme Court's advice was heeded to, can be a matter of enquiry, but it is certain that this year, according to the American Space Agency 'NASA', between October 23 and October 30, incidents of stubble burning in the state of Haryana were much less as compared to Punjab. According to the data of the Indian Council of Agricultural Research (ICAR), between October 1 and November 3, there were 29,780 incidents of stubble burning in Punjab, while this number was only 4,414 in Haryana. The Environment Pollution (Prevention and Control) Authority has also informed the Supreme Court that while Haryana has largely controlled stubble burning incidents, Punjab's situation in this regard is very poor. The news of control of stubble burning by Haryana is a big relief, but the important question is that how Haryana has been able to solve this problem and why Punjab has failed? In this regard we need to learn about the steps taken by Haryana to curb stubble burning, which Punjab should also follow. The Haryana government, this year distributed machines named 'Super sms', 'Rotavator', 'Happy Seeder' and 'Zero Till Seed Drill' in large numbers, so that farmers avoid the practice of stubble burning. The farmers who used these machines last year benefited significantly from this and their yields also increased. Due to this experience, now more farmers have started using these machines, although some farmers believe that they are not able to use these machines due to the high rent (Rs 2000 per acre). But it is true that government efforts towards educating farmers about these machines and increasing awareness among farmers about alternative uses of stubble, has started bearing fruits.

The Haryana government has already been giving an incentive of Rs 1000 per hectare to the farmers for collecting the stubble after harvesting and baling, now the amount of Rs 1000 per hectare has been started from this year for in-situ stubble management on the farm itself. The state government is also giving Rs 10 lakh as incentive to the panchayats of red zone, for burning stubble. Every year the budget of different types of incentives is also increasing. Not only incentive, but also the provision of punishment, has been seen in the state of Haryana. Till the last week of October this year, 1041 challans were issued against stubble burning, in which a fine of Rs 26 lakh was slapped. Due to all kinds of provisions of incentives, technology, experiments and penal action, a situation has been created that where in 2021 till October 26 there were 2010 cases of stubble burning, this year till that time only 1495 cases were registered (a decline of 26 percent).

It is true that the policy of 'stick and carrot' of the Haryana government seems to be successful now, but the solution to the problem of stubble in Haryana was not so effective previously. If we look at the figures, it is known that before 2021, there was a continuous increase in these incidents in Haryana. But only after 2021, there is a decline in these incidents. This may mean that the Haryana government is now taking this problem seriously. But on the other hand, the Punjab government, which was earlier doing a better job than Haryana regarding the problem of stubble burning, is now lagging behind in this battle. Significantly, according to the press release issued by the Central Government on 7 April 2022, 82533 cases of stubble burning were registered in 2021 in Punjab, Haryana, and Uttar Pradesh, which was 7.7 percent less than in 2020. The best performance in this was from Punjab, where only 71304 cases were reported in 2021 as compared to 83002 cases in 2020. While now Haryana is moving towards solution of the menace of stubble burning, the Punjab government has not only been failing, it seems to be in the denial mode too, citing the helplessness of the farmers. But the example of Haryana is indicating that the problem of stubble burning is not insurmountable. All that is needed is a strong political will. The people of India have always been adept at finding opportunity out of crisis. Farmers of Haryana are experiencing increase in production amidst reduction in incidents of stubble burning through better management. With the increase in production by the use of suitable machines, the income of the farmers is also increasing. Earlier it was thought by the farmers that there is no solution except burning the stubble, as its management is expensive, but now they are realizing that by managing the stubble in the field, their cost of fertilizers, pesticides and weedicides can be reduced. Sugar and ethanol can also be produced from the stubble.

Imperative of data sovereignty

If we can protect the data and information from getting monopolised and at the same time make this information freely available to small e-commerce players, small start-ups, government agencies and general public and researchers, then only we can make our country a digital super power.
Dr. Ashwani Mahajan

While there are some sections of the society who are extremely sensitised over privacy of the personal data, but there are many who understand that the ownership of non-personal data, derived from this personal digital data, has great significance for achieving cherished goal of making India a digital superpower . The data is key to understand the behaviour, create influencers for these behaviours along with a big opportunity to create skilled jobs and entrepreneurship opportunities. It is future; it is present & country will have to rise to take grab this opportunity. If we look around, the data is the key to artificial intelligence, shaping of robotic production and machine learning, which is shaping the manufacturing and service sector.

Recently, sharing the draft of the Digital Personal Data Protection Bill, 2022, the government has sought suggestions from the people in this context by 17 December 2022. If legislated this will be a first law on conduct of those who possess data, which is called 'Data Fiduciary' in the Draft Bill.

Significantly, today personal information of people is shared through various digital mediums including apps, websites, service providers etc. We know that in this digital age when we download any app we are asked to give different types of permissions. If the user refuses for this then that app cannot be used at all. The same applies to digital newspapers, various service providers and other types of websites. E-commerce firms and platforms in the digital economy control the data and often indulge in rent-seeking behaviour. Bigger question is that can we afford to pay in dollars or Euros to learn behaviours & solutions of our own conducts or ventures?

Therefore, the very first draft policy statements for e-commerce, which was made public for comments during Suresh Prabhu's tenure as Minister of Commerce and Industry, elaborated at length about the importance of data collected by e-commerce companies and importance of having this data stored in India and discourage misuse of the same by big giants. Incidentally that policy could not be finalized as Suresh Prabhu tenure ended abruptly. Next incumbent decided to drop data from e-commerce policy and wished that the regulations about data would be made by Ministry of Electronic and Information Technology (MeitY).

While preparing the draft bill, which is in circulation today, MeitY took a narrow view of legislation on data, and prepared this bill, claiming to protect the individuals from the possible misuse of their personal information by the big giants including Google, Social media companies, e-commerce companies etc. It clearly fails to appreciate and cover the importance of non-personal data, created by anonymizing the personal data for making India a digital superpower. Though a provision is indicated in the bill about cross border flow of data, but the there is no mention of maintaining sovereign right over the data.

Although this effort being made to protect the personal information of the people, is being considered a step in the right direction, but experts believe that

we will miss the digital bus if we fail to establish sovereign right over the vast amount of data of Indians. Though the questions are being raised about the small quantum of the penalty proposed for breach of personal data, looking at the size of the big data controlling companies, constitution of the board overseeing the implementation of the bill, and absence of the appellate authority etc., a bigger question is, are people sensitive about privacy in India? Probably not. We even give all our personal information to any unknown person at a petrol station. Privacy and sensitivity towards personal information is yet to come in India. But we have to understand that our personal and non-personal information has great economic importance. In today's era, the usefulness and importance of data cannot be underestimated. Today we are in the amidst of Industrial Revolution 4.0. Data, artificial intelligence (AI) etc can be used to achieve, what human brain has not been able to achieve so far. Today the powerful nations are trying to control this data and all out efforts are being made by them to achieve their objective to control data.

The question of sending data abroad and its sovereignty

The proposed Bill provides for cross border flow of data, and says "The Central Government may, after an assessment of such factors as it may consider necessary, notify such countries or territories outside India to which a Data Fiduciary may transfer personal data, in accordance with such terms and conditions as may be specified."

We should know that 800 million people in India today are using different types of apps on their smartphones. In this process, Google, Facebook and other big-tech and social media platforms, e-commerce companies and all kinds of other service providers and websites are collecting unlimited amounts of data, through their clout and wide coverage. They control data by augmenting and mining of data of various types, including people's personal data, their habits, their social relationships, their financial behaviour, their likings and purchases. They augment this data through data mining; and create artificial intelligence (AI) out of it. Many instruments of AI are being prepared. When global powers are using all avenues to acquire this data, India not only needs to own and localise the data produced in the country; there is also a need to carry computation of this data within the geographical boundaries of our country.

Control of people's data and through it, exploitation of the same people, is becoming the specialty of today's data economy. There is a need for such a law through which the country has sovereign rights over the country's data. At the same time, artificial intelligence and various other types of informations should be prevented from being monopolized by big tech, e-commerce and social media companies by augmenting that data. We have to understand that by anonymizing and processing personal data, non-personal data is created and through that information is collected about economic and social practices, including financial behaviour and buying behaviour of different sections of the society.

We need to understand that developed countries are losing no opportunity at international forums to ensure seamless flow of data to facilitate the competitiveness of their companies. The 'free flow of data' would create an asymmetric relationship between developed countries and developing countries and put firms in developing countries at a disadvantage. Therefore, regulation of data is very important.

United Nations Conference on Trade and Development, that is UNCTAD's Trade and Development Report 2018 says: "it is important for the countries to control their data and be able to use/share their data and regulate its flow". Further, the UNCTAD report concludes: "The bottom line is that the potential for development provided by digital technologies can be easily eclipsed if developing countries are not given the flexibility and policy space to design their economic and industrial policies and national regulatory frameworks to promote digital infrastructure and digital capacities."

Our objective of ensuring sovereign right over the data can be achieved if there is a provision in the law that even after sending the personal data of the people of the country to foreign countries, the sovereign right on it remains with the country and the obligation to retransmit the processed data, to India is also ensured. If we can protect the data and information from getting monopolised and at the same time make this information freely available to small e-commerce players, small start-ups, government agencies and general public and researchers, then only we can make our country a digital super power. Through this only, we can succeed in moving rapidly towards Industrial Revolution 4.0.❑❑

Nothing so great about free trade with Great Britain

After the recent phone call between Prime Ministers Modi and Sunak, prospects for an India-UK free trade agreement appear to have brightened. It is likely to include commitments in traditional areas, such as trade in goods and services. It could also have provisions on issues that India has traditionally resisted in trade agreements – labour, environment, gender and intellectual property rights. Further, as India has taken commitments on digital trade and government procurement in its FTA with UAE, these issues are also likely to figure in the FTA with the UK. What could be the eventual impact of the India-UK FTA on India's economy?

- On the trade front, we can expect a modest increase in India's exports of goods and services to the UK.
- With the UK's customs duties already low in most sectors, India's exports could make gains in just a few sectors, such as garments, leather products, gems and jewellery.
- We could also see some increase in India's exports of IT services.

On the other hand, India is unlikely to garner economic gains from provisions related to labour, environment, digital trade, IPRs etc. A study by the UK's department of international trade is sobering. Even in the most optimistic scenario, it predicts that the India-UK FTA could increase India's bilateral exports to the UK by £10.6 bn, and that of the UK by £16.7bn. As these increases are likely to happen gradually and only by 2035, hoping that the India-UK FTA would be a significant contributor to India's export growth appears misplaced. What about the costs for India of the FTA?

India-UK FTA will increase our exports modestly but severely impact digital and climate sectors.
Jayant Dasgupta and Abhijit Das

- Job losses appear inevitable in those sectors where imports from the UK would displace domestically. produced goods and services in India.
- This would arise from reduction/elimination of products. customs duties by India and opening of some services sectors, particularly financial services.
- Costs could also arise from FTA provisions that would curtail the ability of government to use policy instruments to boost the domestic production of goods and services.

Providing favourable treatment to Indian manufacturers and service suppliers in purchases by government is one of the limi- ted policy tools still available to govern- ment to boost domestic produ- cers. Having agreed in the India-UAE FTA to provide non-discriminatory treat- ment to UAE producers, In- dia would find it extremely difficult to resist similar demands from the UK.

It is also relevant to point out that despite the large size of govern ment procurement in the UK, a back of the envelope calculation suggests that less than £20 bn might be procured from sources outside the UK. Given the intense competition from other example. countries, including the EU and US, for this small pie, it is unlikely that Indian exporters will make any significant gains in the UK government procurement market.

- Let us turn to two sectors of huge economic potential for the future, digital sector and climate-friendly products.
- New products and technologies in both these sectors are likely to be created in the developed countries.
- If India does not want to become overwhelmingly dependent on imports, it would have to implement innovative policies for catching up with the first movers in these sectors.
- It is apprehended that the FTA could contain environment-related obligations that could hinder government's efforts aimed at transition to a low-carbon economy being driven predominantly by domestic players.
- And to appreciate the magnitude of economic gains that could be garnered by India through catch-up policies in the digital sector, consider that Rajeev Chandrasekhar, MoS in India's IT ministry, has been quoted as saying that data sets that represent India's consumers present "an estimated opportunity of more than $200-500 billion, if leveraged properly".
- It would be a huge economic cost to the nation, if FTA provisions constrain India from leveraging its data advantage.

For the sake of the country's robust economic future, a detailed and objective assessment of the likely economic benefits and costs of India-UK FTA is needed.

In conclusion, a meagre increase in India's exports of £10.6 bn, that too spread over a decade, does not justify taking onerous commitments that could inflict multiple blows to the country's economic prospects. After all, India has not shied away from taking difficult. but correct, decisions on trade agreements in the past-walking away from RCEP negotiations being one such example.

For the sake of the country's robust economic future, a detailed and objective assessment of the likely economic benefits and costs of India-UK FTA is needed that Indian exporters especially of the provisions relating to labour, will make any significant environment, digital trade and IPRS - before moving forward in the negotiations. ❑❑

Dasgupta is India's former ambassador to WTO. Das is an international trade expert. Views are personal.

Source: TOI

Chinese Protests: Reading the Tea Leaves

Chinese Covid-zero strategy has understandably resulted in widespread resentment and protests by the ordinary citizens there. These eruptions may actually pose one of the most significant challenge to Xi Jinping and his communist party rule since the Tiananmen square agitation of 1989. A crackdown against this exhibition of widely shared anger cannot be ruled out. But such a repressive approach, if followed, will create martyrs. Ironically easing the lock down may cause a spike in illness and death, since a significant percentage of elderly Chinese are either not fully vaccinated – or boosted – or have received less effective Chinese vaccine; understandably some Zero Covid measures have been eased. But simultaneously there is an attempt to tame the protesters' 'Leaders'. This is an attempt on the part of the government to buy some time; after all it can not afford to backtrack or admit that Xi is wrong. Chinese universities have been shut and police are out on streets to prevent more protests advocating 'no dictatorship but democracy'. People are exasperated never the less, since they feel their freedoms have been curbed too harshly; these are the citizens who have never tasted democracy and have no role to suggest how they should be governed. Yet, they chose to come out on streets.

This has led to a slump in factory production as also it has affected general population's ability to earn the daily bread. But China is trapped by its own propaganda directed at projecting the infallibility of its top leadership, mainly of course the president. Xi has called out for 'common prosperity' which is just a slogan like zero covid. There protest have certainly not reached a stage where the state loses control of the situation, and are unlikely to. One may recall how the 1989 uprising was crushed with brute force. Yet one must admit that such burst of anger takes courage in a nation where individuals, having very weak legal rights, are governed with iron hand. But most certainly the country's economy is unlikely to recover in a hurry. The Yuan has lost ground to the US dollar. Also there is increasing internationalization of protests wherein people have gathered in front of Chinese embassies in several parts of the world. Generally China

The current unrest might have challenged the authority of Xi there, but there is unlikely to be an imminent threat-or change in his idea of nation or world- in foreseeable future.
KK Srivastava

dismisses such criticism's this time it may be different. Can we expert China to quit it is game of make believe and make peace with the truth? In our assessment it is rather unlikely that China will act responsibly given that Xi has been elected (!) for the third consecutive term, and his governance model has to be defended at all costs. Xi cannot allow his authority to be dented.

But 2023 will not be 1989. Then China reclaimed the economic high ground. Now it seems hardly likely. Look at the projections by S and P (S&P) below.

The IMF expects the Chinese economy to grow at 3.2% in 2022, nearly 1.2% point slower than its emerging market peers in Asia. In fact Chinese economy has been losing momentum. Between 2002-2012 the economy grew at a CAGR of real GDP at nearly 11% but this rate got reduced to less than 7% during 2012-2021, the Xi period. Xi aims at making China a mid level developed country in the next decade. For this it needs to grow annually at around 5%. But some commentators estimate that it may actually grow at around 2.5% only. So it is not just a matter of temporary lockdowns. Shrinking population, declining productivity growth, and heavy debt burden will present it from becoming the world's largest economy. While earlier (during Deng Xiaoping) private capital – including global players – was welcomed, now there will be greater role for the state, more central planning and attainment of common prosperity. This sea shift of equation between the state and the private capital will likely adversely affect Chinese economic prospects.

Xi's agenda in all matters, economic, political, governance, seems to be solely driven by a need to prove his policies right. But in the process this authoritarian model of governance is likely to fail to respond to the plight of ordinary citizen. But this also means that resentment will find expression in angry protests, especially when political and democratic unfreedom will not be compensated by economic well being. The political supremacy of the communist party will not remain unchallenged. While the government there may not relent in near future, one wonders how the Chinese model will draw its sustenance in the long run. While the Chinese state enjoys immense power as of now over its subjects, perhaps it may increasingly become unsure of its own authority. Democracy as a model may not be ideal but authoritarian regimes are certainly in deep crisis. People are longing for 'Freedom'-political plus economic they wish to govern themselves. Closed societies which feed nationalistic pride to its members while putting their wellbeing at risk themselves are open to upheavals. That's why China found itself unable to contain the epidemic, rejecting the foreign vaccine. Those with their belly full may opt to surrender their political freedom for a while; but when even economic development may not take place they start valuing their personal freedom.

	% Year on Year Change forecast by S&P		
	2021	2022	2023
India (Fiscal Year)	8.7	7	6
China (Calendar Year)	8.1	3-2	4.8

Yet it may be premature to write the obituary of the current regime in China in foreseeable future. This is because Xi may offer tactical concessions on one hand and attempt targeted repression on the other; indeed the regime there has already started working in that direction. Second, most protests – as history worns us – are either contained through a brute force or fade out. Third, these protests need to have a leadership and must be widespread; there is news that instead of having any contagion effect these protests have been quelled. Fourth, now that the power is concentrated in one man and his protégés, who owe it all to him, it will be highly unlikely that Xi will refrain from reasserting his authority, quickly. A concession should not be read as conceding completely. The world may witness a little stepping back by the regime in China but an about turn is not what we may witness.

So, what is the take away? Well, in our opinion Xi faces no substantive threat to his rule or policies as of now. Yet, it will be foolish for him to be in self denial mode; his authority has been definitely challenged. Now only that Xi wants to reposition China as aggressive, revisionist world leader, it actually wants to reshape the local and the world order that should be dictated by him. But he is likely to face a backlash both locally and in international arena. Perhaps he has served himself too much on his plate, political control at home, increasing reliance on state as against markets for economic growth, and more assertive policies aboard in the name of shared destiny. So is the clock ticking? Well, we will have to wait to find an answer. ❑❑

Role of Intellectual Property (IP or IPR) in Innovation Driven Economy of 21st century as relevant to India

We are in the era of knowledge and technology where Human Resource plays a vital role for economic development in any country. However, the Human resource has to be properly harnessed through proper education, skill development under a conducive environment for research and scientific invention and innovation for translating the ideas into assets. Thus there is potentiality for unlocking the hidden wealth which is intangible in the form of human capital.

Research studies show that almost 80% of global wealth is intangible in the form of Patents, Registered Trade Mark for the Brands, Copyrights and in several other forms of intellectual property. Economic Resources are of three types-Human, Capital and Natural and of the three, the Human resource is said to be the richest resource as per World Bank study and contributes to 64 per cent of the total pie as against 16 per cent for capital resource and 20percent for the natural resource. In other words, Human resource is four times greater in value than that of capital resource and accordingly there is change in parameters about which country or company is rich or poor. India has the advantage to have very rich human resource with highest number of youth population in the world in the age group of 15-64.

In the new digital economy, Google, Facebook, Microsoft, Apple, Amazon or any such knowledge based organisations, innovation plays the most vital role. Intellectual property contributes to 34.68 per cent of the US GDP which is more than one third or about plus 7 trillion US Dollar which is more than double of India's total GDP of 3.5 trillion US Dollar. The US Economy or the European Economy largely consists of IP intensive industry and the income from royalty, technical fees and copyright revenue from IP Assets in the form of Patent, technology and Brands is very high. We import not only goods and services but also technology and have to pay almost US$ 30-35 towards royalty and technical fees. Therefore there is a dire need for our country to develop its IP and innovation to

Almost 80% of global wealth is intangible in the form of Patents, Registered Trade Mark for the Brands, copyrights and in several other forms of intellectual property.
Dr. Dhanpat Ram Agarwal

promote our domestic manufacturing with the ownership of Indian corporates.

There is a direct linkage between R&D Expenditure and the numbers of inventions or the innovative products. In order to commercialise the inventions, you also need to have conducive investment climate for entrepreneurship. An inventor is not necessarily an innovator. Steve Jos or Bill gate were not a scientists but were innovator who could use the inventions of other scientists with the help of capital provided by the investors. Thus the trinity of invention, innovation and the investment together bring in economic growth in today's era of innovation and technology.

Therefore if a country desires to grow it has to have all three but the primary need is the research and inventions. It is unfortunate that despite having a very rich human resource and representing almost 18 per cent of the global population, we share hardly 4 per cent of the global GDP and US with a population of nearly 5 per cent of the global population shares more than 20 per cent of the global GDP. Our present spending on Research & Development is less than one per cent or 0.6% of our GDP as against China 2.15%, Germany 3.02%, Israel 4.54%, South Korea 4.55%, Japan 3.21%, UK 1.66% and USA 2.79% and the World Average is 2.2%.The number of Patents filed in India is also very low. In 2017-18 the total filing was 47854 of which almost 80% by MNCs although filing of patents have increased from 42763 in 2014-15 to 66440 in 2021-22, in the last 7 years. The average annual filing of Patents in China is more than 13 lakhs and in USA, Japan and South Korea, the average varies between 3-5 lakhs. Our private sector is responsible for not spending enough for the research and development. The present era is of competition and unless we spend on human resource and R&D, We will continue to depend on imports and this is the reason why automobiles or electronics or several other capital equipment are in demand but are either imported or are being produced by multinationals except very few by the domesticindustries.

Artificial intelligence in the form of internet of things, machine learning, robotics, block chain technology has to be developed in the new industrial revolution which is I-4.

IP Eco System needs improvement for creation, protection, enforcement, commercialisation and awareness as per National IPR policy which was declared on 13th May 2016 but lot of efforts are required to be undertaken in this direction and specially for the awareness at the school level where the budding ideas come from the young mind. Incubation centres need to be set up for nurturing the new ideas. The poor result of the expected demographic dividend is thus evident when we compare our GDP with other global indicators in the form of Global innovation index or the Human Development index or even the Hunger index. Grass root innovation and Jugad technology should be allowed to be patented as Utility Model as done in China and Germany and we can thereby encourage our MSMEs where lots of new ideas take place but our tedious patent laws do not allow them to get a Patent.

Traditional Knowledge can be protected and used more aggressively and our local culture, music and folklore can be protected and promoted at global level.Folk music, Folk dance and other local level intellectual property needs to be identified and protected. Similarly our geographical indications need to be protected and promoted through proper incentive for finance and marketing facilities to the local communities.Brain gain initiative by stopping brain drain and technological piracy and leakages should be stopped.

Artificial intelligence in the form of internet of things, machine learning, robotics, block chain technology has to be developed in the new industrial revolution which is I-4. Domestically manufactured local goods have to be made more qualitative and competitive under Make in India, Skilled India and Start up India initiative. It will reduce our dependence on imports and reduce our current account deficit and make us more self- reliant. Our exchange rate can improve only by improving our innovation index with more start-ups and manufacturing of qualitative goods at competitive prices and thereby reduce our dependence on imports and thereby not only conserve the precious foreign exchange but also increase our exports. We can make our country more prosperous by creating more jobs for our youth and take advantage of demographic dividend and ultimately reduce or eliminate poverty. ❑❑

Dr.Dhanpat Ram Agarwal: Director, Swadeshi Research Institute, Kolkata & National Co-Convener, SJM

Will Sarson Ka Saag Become Junk?

Come winters there is a distinct flavour of sarson ka saag in the air. A mouth-watering delicacy that has been part of our culture for ages. But there are fears that this age-old indigenous delicacy may become a rarity with the Union Ministry of Environment & Forests considering to grant commercial approval to genetically-modified (GM) mustard, Knowing the health hazards that accompany GM foods, people would certainly prefer to stay away from *makki ki roti, sarson ka saag.*

Logically, there is no desperate reason to genetically modify a food crop that has traditionally been a part of the daily cuisine. Moreover, there is no way to segregate the GM mustard from normal mustard that one can be sure of. Five years after the Ministry of Environment & Forests had in 2010 imposed a moratorium on Bt brinjal, which, if approved, would have been the first food crop in India to be genetically modified, the Genetic Engineering Appraisal Committee (GEAC), the nodal agency that grants approvals, is getting ready to give a green signal to Delhi University's GM Mustard variety DMH-11. The claim is that this GM Mustard gives 20-25 per cent higher yield, and also improves the quality of the mustard oil. It is time to examine the veracity of these claims.

Claims notwithstanding, it is also time to first understand how easily our food is being tampered in the name of increasing crop productivity. The fact of the matter is that there is no GM crop so far across the globe that increases productivity. Even in GM Mustard, the increase in yield that is being claimed is simply because of the hybrid variety in which the three alien genes have been inserted. Which means if you grow one of the popular mustard hybrids already available in the market, you will hardly have any yield advantage. It is being repeatedly said that India imports edible oils worth Rs 60,000-crore every year, and therefore with an increased productivity of GM Mustard, the import bill will be reduced. For those who do not know the real situation, this looks to be a worthwhile proposition. But what is not known is that the huge imports are not because of any shortage of technology or because farmers are unable to produce more. It is simply because successive governments have allowed import duties to be drastically cut from the applicable rate of 300 per cent to almost zero now. As a result, India has been inundated with cheaper imports. The Oilseeds Technology Mission converted India—from a major importer to become almost self-sufficient in edible oil production.

Fallacious claims are being touted by the lobby favouring GM mustard knowing very well that the accompanying health hazards would be far too grave for the nation to bear.
Devinder Sharma

The Downslide

And then began the downslide. India happily bowed to World Trade Organisation (WTO) pressures to kill its Yellow Revolution. In fact, the demise of the Yellow Revolution is a classic case of how a promising domestic edible oil sector was sacrificed at the altar of economic liberalisation. Severe cuts in import tariffs brought in a flood of cheap imports thereby pushing farmers out of cultivation. Import duties – from a bound level of 300 per cent were slashed to almost zero – in a phased manner. As a result, farmers abandoned cultivation of

oilseeds crops and the processing industry too pulled down the shutters. India today imports more than 67 per cent of its edible oil requirement costing a whopping Rs 66,000-crore.

Agriculture Minister too has time and again stressed the need to reduce the dependence on edible oil imports. Ask any educated and concerned citizen and he too would call for cutting down on imports and helping domestic farmers. But I thought the Ministers would at least know that India was actually self-sufficient in edible oils, and it's because of our faulty trade policies that the country has turned into world's second biggest importer of edible oils. When I made a presentation before the high-level Shanta Kumar Committee on bifurcating Food Corporation of India (FCI) on how trade liberalisation had destroyed the oilseed revolution, he was very understanding. His recommendations include the need to revisit the trade policies so as to protect domestic production from cheaper imports.

Let us be clear. It's not because of any shortfall in oilseeds production that India imported Rs 66,000-crore of edible oils in 2015. It's simply because we wanted imports to be encouraged that the country is saddled with a huge import bill. Although the sub-committee of the Genetic Engineering Appraisal Committee (GEAC), the nodal inter-ministerial agency whose approval is necessary, has cleared three varieties of GM Mustard (including DMH-11 and two parental lines) as being 'safe', the fact remains that the safety data is being kept hidden. This had prompted the Central Information Commission (CIC) to direct the GEAC to share safety data with the public. It was nice that the ministry promised to put the data on GEAC website and invite public comments. But what shocked me is to know that the GEAC members are not at all perturbed that GM Mustard will increase the usage of chemical herbicides. In fact, the clever stacking of herbicide tolerant genes in GM Mustard favours the herbicide being sold by a multinational company, Bayer.

Failed Experiments

Even Bt cotton had increased the application of chemical pesticides, Regardless of what the industry claims, the fact remains that the usage of pesticides has gone up in India. According to Central Institute of Cotton Research (CICR), in 2005, Rs 649-crore worth of chemical pesticides were used on cotton in India. In 2010, when roughly 92 per cent of the area under cotton shifted to Bt cotton varieties, the usage in terms of value increased to Rs 880.40-crore. In China, where Bt cotton was promoted as a silver bullet case, farmers apply 20 times more chemicals to control cotton pests. In Brazil, which has recently taken over Argentina as far as the spread of GM crops is concerned, pesticide usage has gone up by 190 percent in the past decade. At a time when cotton farmers in India have moved away en bloc from the genetically modified Bt cotton after the 2015 debacle with whitefly attack and the crop becoming susceptible to bollworms, I thought the Ministry of Environment would have learnt a lesson. I see no reason why GM seed companies are not being held accountable for the whitefly devastation caused last year, including suicides by some 300 cotton farmers in Punjab. Is human life so cheap in India that the Ministry of Agriculture and Farmers Welfare remain silent on suicides in the cotton belt? Civil society groups under the banner of Coalition for GM Free India have already rubbished the productivity claims of 26 per cent higher yield being claimed for GM Mustard. They have accused the developers of falsifying the data and comparing the yield performance of GM Mustard with some of the useless varieties.

The share of mustard oil is only 10 per cent of the total edible oil consumed. Thrust should be to raise the import duties on edible oil and provide farmers with a higher procurement price. They will do the rest. Let's not use the argument to force controversial and risky GM Mustard as the solution. This is not fair. And if you have seen someone saying in TV ads that the mustard oil we buy is largely contaminated, this is an area that needs urgent attention. ❑❑

(This article is reproduced from Organiser issue dated on September 10, 2017)

Save The Bees

The serenity of the vast golden yellow-hued landscape of rapeseed and mustard is inseparably associated with the image of honey bees on its flowers, reflecting the unique association of mustard and honey bees since time immemorial.

Flowering plants and insects, especially bees coevolved 60-100 million years ago, long before the appearance of mankind on the earth. Plants evolved a mechanism of reproduction that involved pollination only where pollinators lived and a majority of 2.50 lakhs flowering plant species on the earth has amazingly complex relationships with the bees and pollinators. Such relatively colourful flowers have a capacity to reflect ultraviolet light which is well seen by the bees. Plants have progressively evolved themselves to prevent self fertilisation. The plants invested heavily into production of colourful flowers with carbohydrate rich nectar and protein rich pollen. Animal pollinators on the other hand modified their feeding behaviour to utilise these floral resources. Bees are thus, not just the guests but thoroughly adopted symbionts, because they feed and rear their young ones on the products gathered from the flowers and in turn bees provide cross pollination services to the plants.

India is the geographic home to the greatest genetic diversity of rapeseed and mustard – a group comprising yellow sarson, brown sarson, toria, carinata and taramira besides many wild species. Indian mustard (Brassica juncea), the major species, is mainly grown in Haryana, Punjab, Rajasthan, Uttar Pradesh, Madhya Pradesh and eastern States of West Bengal, Bihar, Assam, in winter season under limited moisture conditions. India is home to three of the four well known species of honey bees viz. Indian hive bee, Apis cerana which is both domesticated and available in the wild; and two wild bees – the rock or giant honey bee, A. dorsata and Little bee, A. florea.

Nature continuously performed the selection process based on the principle of "survival of the fittest" in the evolutionary process which is slower. Taking a cue from nature, scientists adopted traditional breeding practices by selecting varieties with better yield and quality traits. Rapid strides in science changed the face of traditional breeding and the recent approaches of genetic engineering facilitated inter-specific gene transfer to breed "genetically modified or GM" crops. GM crops were seen as the major game changer but the world is divided into two blocks, one favouring them and the other having aspersions of their ill effects. GM mustard is among the ever-growing list of GM crops including cotton, maize, soybean, brinjal, alfalfa, beet, squash, sugar beet, etc. Bt cotton was the first

Introduction of GM mustard will have a serious impact on bee-Keeping Industry.
Prof. OP Chaudhary

GM crop introduced in India and has witnessed initial success but later on failure due to multiple reasons. Reports of illegal planting of Bt brinjal has also been reported. Genetically engineered mustard hybrid DMH 11 developed by Centre of Genetically Manipulation of Crop plants (CGMPC) University of Delhi South Campus, has sought clearance from the GEAC, Ministry of Environment and Climate Change in 2016 that was deferred under public pressure.

Contribution of Pollinators

As per the estimates of Chaudhary and Chand (2017), oilseeds in India, primarily comprising 14 crops, are the fourth largest contributor (10.0 per cent) to the national agriculture output, valued at Rs 1,29,143 crores. Oilseeds are essentially dependent on honey bee pollinators for their production. The estimated economic value of pollination (EVP) of rapeseed and mustards in India are staggering Rs. 19,355.7 crores annually and contribution of all the oilseeds at an average EVP of 34.1 per cent is valued at Rs. 43,993.08 crores annually. Recently, Genetic Engineering Appraisal Committee (GEAC), Ministry of Environment and Forest, while concluding the biosafety assessment of the above proposal has approved its environment clearance paving the way for its commercial release. Due to the intervention of the Supreme Court, the release of DMH 11 is on hold now. Substantial difference in days taken for flowering by B. oleracea, B. carinata, Sinapsis alba and Rhaphanus sativus (112 days) and GE mustard hybrid DMH 11 (58 days) and the absence of synchronous flowering under growing season has been proposed to negate the possibility of outcrossing among these species by the developers. The reality in fact, is opposite since it is practically impossible to avoid staggered sowing under field conditions. Practically, sowing normally extends from October to mid November due to numerous factors including weather conditions, availability of fields, rainfall, germination, field events like crop/plant destruction due to pests, etc. resulting in asynchronous flowering and enhances greatly the gene flow/contamination and outcrossing with B. oleracea and other oilseed crops not only in the vicinity but in the entire foraging range of the honey bees.

GM pollen travel is estimated up to only 20 metres due to the presence of 7 herbicide Basta resistant plants within this distance is considered safe. However, failure to factor honey bee mediated gene transfers up to 3 km distance and even interspecific crossability of DMH-11 with B. juncea varieties may prove disastrous unless seed production is ensured in safest enclosures, which is extremely unlikely. Complications arising from accidents or willful acts during seed production can't be ruled out.

Compounding the misery is the viability of DMH-11 pollen up to 72 hours that can lead to wide scale contamination from the honey bee colonies back migrated from North and central Indian migratory sites after cessation of mustard season to eastern state of Bihar within a period of 48 hours where yellow mustard is still in flowering. Such cross country contamination may ruin the highly demanded Indian yellow mustard.

Even on the biosafety concerns, the reported conclusion that "although, food and environment biosafety assessment elaborated in this document did not reveal any measurable risk, for sustained use of technology for newer hybrids some post-release monitoring/ stewardship is suggested as a precautionary measure. The measures suggested include monitoring of honey bee behaviour particularly with respect to presence of target proteins in honey; impact on non-target organisms and intra and inter-specific interactions." This statement of the developers of DMH 11 is a testimony that mandatory protocols have not been undertaken during the testing and are relegated to the post release that are impermissible. Similar is the condition for mandatory biosafety assessment of pests, parasites and predators that are lacking. The rapid fire destruction of up to 95 per cent of Indian hive bees, A. cerana colonies from 1978-1983 from North-East to North India and from 1991-93 in South India that ravaged a flourishing Indian honey industry still echoes in the mind of the beekeeping fraternity. The present initiatives of introducing GM mustard DMH 11 is a grim reminder of the events that may unfold in the future. Indian beekeeping at this juncture is not in a position to take any other body blow. The mutualistic relationship of the mustard and the honey bees since time immemorial, recent world and Indian events of rapid fire spread and epidemic of deadly pest and diseases is a forewarning that shall not be ignored by venturing into unnecessary misadventures that may spell doom to another man-made ecological disaster. ❑❑

https://organiser.org/2022/11/22/99449/bharat/save-the-bees/

Biden seeks to revive US-China ties

By walking the length of a long hall to greet President Xi Jinping at the G20 summit in Bali, Indonesia, on November 14, US President Joe Biden ceded the optics to the Chinese helmsman. The warming up to China was long expected in view of wintry ties with Russia over NATO's expansion to its doorstep in Ukraine, and the economic sanctions that boomeranged into an energy-food-fertiliser crisis in the world, especially Europe. The decision of President Vladimir Putin to skip the G20 made the Washington-Beijing diplomacy less awkward.

Taiwan, previously relegated to the backburner under US's acceptance of One China Policy but retrieved from the closet as tensions over trade escalated with Beijing, has de facto receded to the background again. With its armaments inventory seriously depleted by the Russia-Ukraine hostilities, Washington is unlikely to confront mainland China over Taiwan, despite the rhetoric.

The Guardian reported that though Biden had a cold, the "notoriously Covid paranoid" Xi shook his hand. Smiling for the cameras, both leaders showed a desire for "a better working relationship." Alluding to the cool bilateral ties between the two nations, Xi said global expectations require the leaders of the two superpowers should act as a ship's rudder and "chart the right course" and "elevate the relationship". Biden in turn pointed out that China's Taiwan policy was 'aggressive'.

The White House readout of the hour-long meeting stated that while the United States would continue to compete with the PRC, the two nations should manage the competition responsibly and maintain open lines of communication to avoid conflict. President Biden urged that they work together to tackle transnational challenges such as climate change, global macroeconomic stability including debt relief, health security, and global food security.

Biden expressed concerns about Beijing's actions in Xinjiang, Tibet, and Hong Kong, and human rights in general. On Taiwan, he reiterated opposition to unilateral changes to the status quo, and called for peace and stability in the Taiwan Strait. He mentioned US's concerns about China's non-market economic practices that harm American workers and families, as also around the world, and said American citizens who are wrongfully detained or subject to exit bans in China are a priority for the US.

As the US President mentioned Russia's military action against Ukraine and alleged threats to use nuclear force, Presidents Biden and Xi reiterated their opposition to a nuclear war and the use or threat of use of nuclear weapons in Ukraine. Biden further mentioned North Korea's provocations and emphasised Washington's commitment to defend its Indo-Pacific Allies.

The US warming up to China was long expected in view of wintry ties with Russia over NATO's expansion to its doorstep in Ukraine.
Sandhya Jain

Xi in turn informed Biden that Taiwan is at the "very core of China's core interests" and blamed the US for stirring discord. Both leaders agreed to "empower key senior officials" to discuss areas of potential cooperation, including tackling the climate crisis, and maintaining global financial, health and food stability. It may be recalled that China had suspended climate change talks after US House speaker, Nancy Pelosi, visited Taiwan in August 2022.

A critical source of irritation for Beijing is the Biden administration's moves to ban the export of chips, the possibility of a "trade war or a technology war," and the disrupting of supply chains. The Chinese readout of the meeting was silent on America's criticism of Russia's war with Ukraine, but said China "supports and looks forward to a resumption of peace talks between Russia and Ukraine" and "at the same time hopes the US, NATO and the EU will conduct comprehensive dialogues with Russia."

Xi was firm about Beijing's interests in Taiwan and countered concerns over human rights stating, "no country has a perfect democratic system" and "just as the United States has American-style democracy, China has Chinese-style democracy, both fit their respective national conditions."

It may be recalled that President Xi attended the Shanghai Cooperation Organisation summit in Samarkand, Uzbekistan, in September 2022, where he met Russian President Putin. China has been tense over not being informed about Moscow's impending action in Ukraine when Xi and Putin met in Beijing in February 2022, just 20 days before the military action, as it put Chinese nationals then living in Ukraine in danger. Some are said to have died during the evacuation, though numbers are hard to ascertain in the absence of an official statement.

Putin has since admitted that he did not confide in Xi, but insisted that the strength of the relationship with China was "unprecedented". Interestingly, since the special military operation began in Ukraine, Xi has called or met Putin at least thrice, but not spoken with Ukraine President Volodymyr Zelenskyy even once.

Beijing values its proximity to Russia given America's moves to derail its economy through trade and technology sanctions, particularly its access to semiconductors that are vital for the development of next-generation technologies.❑❑

https://www.sandhyajainarchive.org/2022/11/17/biden-seeks-to-revive-us-china-ties/

India's White Revolution Runs Into Fodder Problem

India has a fodder problem and the fate of over thirty crore cattle hangs by a thread, as fodder prices sharply increase and rumours of worsening shortages spread like wildfire in the farms. The government held emergency meetings in which it declared there are "no shortages", but it is an open secret that India has a significant chronic fodder deficit. Typically, the shortfall is about 11-12% for dry fodder, 25-30% for green fodder, and 36% for concentrated fodder. As a result, meat and milk production gravely suffer. But what is the situation this year?

Cattle reeling under the lumpy skin disease have sent milk production plummeting, along with the earnings of those who rear them. Now, fodder prices have risen from Rajasthan to Bengal. Going by the government's recent estimation, dry fodder prices rose to Rs. 8-14 per kg from Rs. 5-6 last year.

Major cattle-rearing states have reported over 200% increases in fodder prices. It is during the harvest season that fodder is usually available aplenty, and prices can fall to around Rs. 3-4 per kg. Currently, in many places, it is selling at over Rs. 10 per kg in unprocessed form. Even dairy operations, especially in the small and unorganised sector, are suffering due to sudden spikes in fodder prices.

Milk and meat production suffer gravely in India due to the poor quality and chronic under-availability of fodder. There are solutions, but is anybody listening?

Indra Shekhar Singh

Feed and fodder contribute half or more to the cost of milk. Further, in India, improving fodder quality can enhance milk production and quality more than breed improvement. So, the higher fodder prices get, the costlier milk and derivates will get, while the average yield of Indian animal breeds would remain lower than globally.

In Gujarat, home to India's largest dairy cooperative Amul, the bulk rate for jowar [sorghum], wheat straw and dried bajra [pearl millet] is over Rs. 15 per kg. When contacted, cattle farmers in Bikaner, Rajasthan, said they are able to procure as much fodder as they need—but only at sharply escalated prices. In May and June, there were serious concerns about shortages, but a spell or two of rainfall boosted the green fodder supply. The wheat under cultivation in Bikaner was already low this sowing season because many farmers preferred to sow higher-earning mustard. Therefore, in summer, Bikaner (and other parts of North India) had the classic conditions of fewer (than even the usual) supplies, leading to a price rise in the main crop as well as its offshoot—fodder.

The pressure on cow shelters and cattle farmers started amping up in the summer—farmers began to struggle to find fodder that met both the crucial needs of a steady supply and a reasonable cost.

Anurag Saxena, who looks after fodder production at the National Dairy Research Institute (NDRI), run by the autonomous government agency Indian Agriculture Research Institute (IARI) says, "The per quintal price of dry fodder

has reached Rs. 1,800 this season, which very high. This is a result of the heat waves in March and April, which devastated the standing wheat crop. The market had less wheat stock, which led to price inflation."

"Wheat production in Punjab, Haryana and Uttar Pradesh was impacted during Rabi season 2022. And now, due to irregular rain, the berseem [Egyptian clover] crop has also suffered. Other dry crops such as bajra, and fodder crops have also taken a hit," Saxena says.

In Jhansi, Uttar Pradesh, Dr Purushottam Sharma, the head and principal scientist of livestock production and management at the Indian Grassland and Fodder Research Institute (IGFRI), another IARI body, says, "There is a huge price rise when it comes to fodder. From the usual Rs. 1,000 per quintal, now it is more than Rs. 1,500 per quintal. Now due to ongoing rains, the green fodder crops are also affected. Excessive rainfall has damaged crops. For example, untimely rainfall has badly affected legume crops in the Bundelkhand region. Dry fodder crops such as Bajra, pulses, etc., are also affected."

Reports from across North India make it clear the fodder problem in 2022 also has a climate change angle. Untimely rain and heatwaves disrupted the fodder economy—an already deficit supply was further hampered, leading to price escalation. However, do Indian policymakers have a solution to the looming fodder deficits and inflations? Let us find out.

Fodder Solution

Fodder usually falls under the ambit of state governments. The IGFRI has put in the public domain State-wise plans for fodder management and supply. "But if States adopt multi-cropping along with perennial grass and fast-regrowing fodder, India could easily fill the gaps in shortages," says Dr Sharma.

But Dr Saxena presents the reality check, "Food grains are the top priority for farmers. Fertile land is shrinking, while the population pressure is increasing. This situation makes fodder the last priority. That's why we can only raise fodder production through price controls and support for farmers."

Historical reasons are important here: the Green Revolution varieties of food crops diminished fodder availability. No doubt, fodder development has advanced too, but pre-green revolution paddy and wheat varieties had longer edible stocks, which were used as fodder, after the grain was threshed. Newer varieties are aimed at higher grain production, and hence have shorter inedible stocks, especially in paddy. At any rate, fodder crops now require to be grown in separate areas. Our current agricultural thinking only feeds humans and leaves the animals needs behind.

Zoom out to the national level, and harnessing the full potential of milk and meat production is still a far cry. And it would be impossible without setting up an authority dedicated to fodder management, along the lines of the Food Corporation of India. Statewise, farmers must be encouraged to grow fodder, green and dry, which can be transported for consumption in other regions. An introduction of minimum support price or MSP for fodder, accompanied by public procurement of crops that yield fodder, such as bajra, pulses, berseem, etc. could help fill the immediate gaps.

Experts advise caution in managing supplies and production. They say it would be essential to create fodder-producing clusters and FPOs backed by financial incentives. Climate change impact and seasonal lulls in supply and demand mean that better management techniques are as important as raising production. A fodder authority could establish village-based centres, especially in dry areas of Rajasthan and Gujarat, etc., to provide fodder at regulated rates. A network of fodder mandis (market yards) needs to be created in the major cattle-rearing states.

The central government has been mapping the cattle population through a tagging system—think of it as an Aadhaar card for cows—but what we need is fair-priced fodder for livestock on a mass basis, not policing of cow populations and consumption habits. States need emergency supplies and stockyards for fodder, which can be converted into silage (preserved fodder) and stored for future use. And last but not least, the Union budget 2022-23 made a Rs. 8,514 crore allocation for agriculture research, the same as the revised estimate in 2021-22, marking a 0% hike. Indeed, the Indian Council for Agricultural Research got the largest chunk of this allocation—Rs. 5,877 crore, up roughly Rs. 315 crore from the previous year. Most of this money goes to paying salaries and continuing older projects.

Fodder research in the light of climate change is essential too. India must devote more resources to climate adaptation strategies for fodder crops. Else, the while revolution may die a sad unprofitable death. ❑❑

The author is an independent analyst and writer. The views are personal.

https://www.newsclick.in/india-white-revolution-runs-fodder-problem

Indian health data $ 7bn treasure, **AIIMS info Breach is Risky**

Health data is critical. Had one secret been known, Indian subcontinent may have had different political contours. In 1947, Mohd Ali Jinnah's health conditions were in wraps giving no clue to Congress leaders that his days were numbered. Had there been the slightest inkling, possibly the Indian subcontinental history could have been different. But did the British rulers know about it? Is that the reason that the Radcliffe Commission drew the lines of Partition in five-week haste without visiting those areas? These are difficult questions but everyone has secretly admired the way the critical information of Jinnah remained in shrouds. The healthcare information rarely may have had such immense political and economic significance. The incident is being remembered as for days the critical All India Institute of Medical Sciences, Delhi, web portal server is inoperational, since November 23 morning, supposedly because of suspected ransomware. The AIIMS has switched over to manual procedures and sought the assistance of Indian Computer Emergency Response Team or CERT-IN, the nodal emergency agency of the Ministry of Electronics and IT.

The AIIMS data breach may be graver than it appears. It may be recalled that how a global collaborative investigative project revealed that Israeli company NSO Group's Pegasus spyware targeted over 300 mobile phone numbers in India, including that of two serving ministers in the NDA government, three opposition leaders, one constitutional authority, several journalists and business persons.

No less worrisome were the Cambridge Analytica, which had allegedly stolen the data of 50 million Facebook users in 2014, claimed that the Congress party was the firm's client in India. Some other apps despite pious intentions were blamed for compromising data.

The latest move for a data protection law needs to have a wider ambit. Almost all apps on the social media, corporate or public seek unnecessarily access

Health data is critical. Had one secret been known, Indian subcontinent may have had different political contours.
Shivaji Sarkar

to contacts, camera and location. These must be stopped. The Competition Commission of India (CCI) on October 25 imposed a fine of Rs 936.44 crore on Google for anti-competitive practices in its Play Store policies.

The Indian healthcare data is stated to be worth $ 7 billion in the world market. It is just not about profiling a population but information of some key persons itself may be worth more than that. The global healthcare information market size is valued at $ 359.8 billion in 2021 and is expected to expand at a compound annual growth rate (CAGR) of 13.2 percent till 2030.

The risk is far greater than it can be fathomed particularly in the light of government using the coronavirus pandemic to push its plan to digitise the health records and data of 1.3 billion people, despite concerns about privacy, increased surveillance, technology and human rights. It can be utilised in many ways, including for blackmailing, seeking ransoms or political mapping. The storing of individual information in Aadhar and linking it to several instruments like income tax data, balloting system and banking are fraught with great risks to the nation and individual citizens.

According to a report published in The Lancet journal, in 2016, global expenditure on health is anticipated to increase to $ 18.3 trillion by 2040 across the globe. So would data worth multiply.

Hackers' access to private patient data not only opens the door for them to steal the information, but also to either intentionally or unintentionally alter the data, which could lead to serious effects on patient health and outcomes. If this at all happens to AIIMS or any health data, it can lead to severe flaws in the line of treatment. The Ayushman Bharat itself has enormous records along with ESI Hospitals. The move to have a centralised healthcare data needs rethinking.

AIIMS attack may have many dimensions. It presumably has sensitive medical data that can be attacked, copied and altered. On May 14, 2016, AIIMS, Raipur also similarly suffered an attack by a Pakistani hacker, Amir Muzaffar. The homepage of the institute was damaged and the hacker left messages of bravado.

That data on the net is not safe was exposed by Indian hackers claiming to have accessed more than 80,000 coronavirus patients' healthcare records that were insecurely stored on government servers in June 2020. The group, calling itself Kerala Cyber Warriors, announced that it had gained access to the Delhi State Mission website "in less than 10 minutes". Its members claim to have accessed sensitive data including patients' names, addresses, phone numbers, covid19 test results, and passport details. In the US itself, in 2019, 41.4 million patient records were hacked.

At the initial peak of the covid19, Indian healthcare industry registered 7 million cases of cyber attacks. With a 300 percent surge in such attacks in India, it is necessary to place intrinsic security at the heart of digital strategies.

The stolen health records may sell up to 10 times or more than stolen credit card numbers on the dark web. The cost to correct a breach in healthcare is almost three times that of other industries — averaging $ 408 per stolen health care record versus $148 per stolen non-health record, says IBM and Ponemon Institute report.

In May, 2017, patient outcomes were threatened when Britain's National Health Service was hit as part of the "WannaCry" ransomware attack on computer systems in 150 countries, resulting in ambulances being diverted and surgeries being cancelled. Similar ambulance diversions due to ransomware happened in the U.S.

In September, 2020, a key Indian political person's account was hacked, as per Twitter.

The US experts say that with proper planning and investment, it's possible to mitigate this risk. The NIC and AIIMS has to do it. The government has to protect the information delinking it from Aadhar, PAN and other instruments.

Health care organizations are particularly vulnerable and targeted by cyberattacks because they possess so much information of high monetary and intelligence value to cyber thieves and even the targeted key persons. The targeted data includes patients' protected health information (PHI), financial information like credit card and bank account numbers, personally identifying information (PII) such as social security numbers, and intellectual property related to medical research and innovation. One reason of the vulnerability is the easy access to the sites for diagnostic and treatment facilities. The gateways for users need separation.

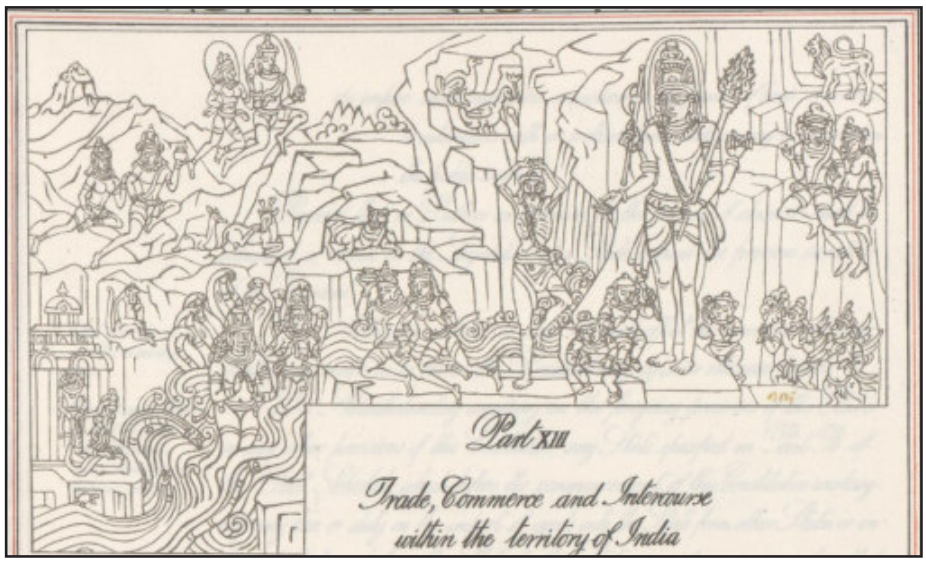
The AIIMS or any healthcare breach is perilous and the nation needs to be extremely cautious on centralised data prospecting. ❑❑

The impact of Sanatan Bharatiya (Hindu) Values, Culture & Tradition on our Constitution

The chapter on Raja Dharma in Shanti parva incorporates Bhishma's authoritative exposition about the origin and purpose of the State, the rule of law, the institution of Kingship and duties and the power of the King(Ruler i.e. PM/ CM/ Ruler). Raja Dharma (law of Governing) consists of invaluable and eternal principals worthy of emulation under any system of polity and by all persons exercising State's Power. The system of government envisaged by all the works on Raja Dharma (Constitutional law) was Rajya (State) headed by a King (the ruler). The topics covered in various ancient works such as Smriti & Shastras includes constitution and organisaton of Rajya, Kingship, succession to kingship, succession to kingship, education of young princes, appointment of council of ministers, the Chief Justice and other Judges of the highest court, administrative divisions and power and the duties of king(the ruler). With simple glance of our Constitution, one can come to conclusion that topics under Raja Dharma were also part of our Bharatiya Constitution drafted Dr Babasaheb Ambedkar.

The partition of India in 1947, made this unique land of cultural unity divided into two pieces on Hindu-Muslim basis leads two nation theory which was undesirable to the majority people. Muslim conspirators materialized their land as Pakistan through bloody direct action against the majority Hindus, whereas the Hindus, the largest contributors of freedom struggle, did not get the Akhand (Hindu) Bharat in return. At the time of partition, the Muslims who did not leave this country presenting so-called secular mentality were not the patriot people. Since they planned another partition in near future. i.e. Kashmir to Kerala, Hyderabad to Muzaffarbad. Muslim/ Secular Agents like Liyakat Ali Khan, Firoz Khan Noon, Khaja Nizamuddin, Shaid Swharabardy, Jafarulla Khan, Md. Saadullah etc. who were present in the Constitute Assembly and Drafting Commit-

In conclusion we can say that the impact and significance of the Bharatiya values on our Constitution is crystal clear. Either it can not be denied or undermined.
Mahadevayya Karadalli



tee tried for adopting a Non Hindu texture of Indian Constitution. We cannot ignore the hidden relationship of Azad with the communist leader Muzaffar Ahamed and critical role to deter any Hindu fervor of Indian Constitution.

God saved us, Sardar Vallabh Bhai Patel, Dr Bhim Rao Ambedkar and Dr Shyama Prashad Mookerjee the three true nationalists were present in the Constitute Assembly and Drafting Committee and acted in favour of the majority sentiments in this land. They adopted some deliberate actions in favour of the majority people and Sanatana Bharatiya (Hindu) Nature of this ancient land. Indian Constitution under (Art 48) says that measures of 'prohibiting the slaughter of cows' has been derived from Bharatiya Values of this land. Similarly, Art 48 A directs the states and every citizen for the protection and improvement of environment and safeguarding of forests and wild life. Highlighting the Bharatiya Values for dignifying the Mother Nature and environment in peace and freshness. Art 351 expresses the importance of Sanskrit language. Art 44 for Uniform Civil Code promotes the concept of Hindu values of equality and justice for all of the citizens without perpetuating any discrimination between the 'believers and non believers' as promoted by the Semitic schools. Indian constitution explore the Bharatiya Value system more significantly to uphold the Bharatiya Values, tradition and culture. Obviously, the Bharat Constitution propounded on the heights of Humanitarian Hindu outlook and never on any Semitic or Communist concepts and rejected the malfunctions of Sharia or the orthodoxy of any church in its preview.

Every citizen has fundamental right to discharge his duties. It is indisputable that everyone of the human beings has to perform different duties under different circumstances.

Unfortunately, this philosophy propounded in Bharat constitution was challenged by Smt Indira Gandhi autocrat leader of Indian emergency, by infiltrating two words, 'Socialist' and 'Secular' in the striking 42nd amendment of constitution. But blessing indisguise, Fundamental duties were incorporated as Part IV by 42nd amendment to Constitution which was in tune with following shloka of MahaBharat and written on the walls of Parliament.

Swe swe karmanyabhirath samsiddi labhate Nara: By discharging whatever duties are entrusted to an Individual, he succeeds in life (Bhagavadgeeta 18-45). Every citizen has fundamental right to discharge his duties. It is indisputable that everyone of the human beings has to perform different duties under different circumstances.

Ancient Raja Dharma (now it is Constitutional Law) reads: Just us mother earth gives equal support to all the living beings, a kind should give support to all without any discrimination.

According to Ancient Raja Dharma (Constitutional Law) as quoted by Kautilya (300 BC) "In the happiness of the subjects lies in the King's (ruler's) happiness, in their welfare his welfare, what pleases himself the king(ruler) shall not consider as good but whatever pleases his subjects the king(ruler) shall consider good. In this background, Constitution (Article 14, 15, and 16) confers the right of equality before law and equal opportunity to one and all, prohibits discrimination on the basis of religion, castes, sex, etc., And abolished untouchability (Article 17) consistent with the noble objective enshrined in its preamble.

Article 48 of the Constitution mandates total ban on cow slaughter.

Even in the Constituent Assembly the stand taken by Muslims was that though they have no sentiments like Hindus in the matter, they respect the sentiments of the overwhelming majority of the Hindus and therefore they are supporting the inclusion of Article 48 in the Constitution.

Article 14 reads: The State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India.

Ancient Raja Dharma (now it is Constitutional Law) reads: Just us mother earth gives equal support to all the living beings, a kind should give support to all without any discrimination.

Constitution (Article 14,15, and 16) confers the right of equality before law and equal opportunity to one and all, prohibits discrimination on the basis of religion, castes, sex, etc., And abolished untouchability (Article 17) consistent with the noble objective enshrined in its preamble.

Right to Education Supreme Court of India in the case of Un-

nikrishnan, AIR 1993 SC 2178 in order to make out that right to education constitutes part of the fundamental human right to life and liberty guaranteed under Article 21 of the Constitution as there was no specific right to Educaiton in Part III of the Constitution which incorportates Fundamental Rights. The Supreme Court of India in its Judgement quoted the Birthruhari (quoted by Justice Dr M Rama Jois) verse and added that there is nothing further to state that education constitutes an important fundamental right. Consequent on the said judgement , the Parliament amended the Constitution by incorporating Article 21- A conferring fundamental right of education to all.

The expression Dharma Rajya in ancient Indian Constitutional vocabulary meant Rule of Law and not Rule of Religion. Just as darkness cannot exist when light exists, fundamentalism cannot exist where Dharma exists.

Our Constitution confers the Fundamental Right to all to practice any Religion of their choice. Article 25 reads -

Article 25: Freedom of conscience and free profession, practice and propagation of religion:

Subject to public order, morality and health and to the other provisions of this Part, all persons are equally entitled to freedom of conscience and the right freely to profess, practice and propogate religion.

The expression Dharma Rajya in ancient Indian Constitutional vocabulary meant Rule of Law and not Rule of Religion. Just as darkness cannot exist when light exists, fundamentalism cannot exist where Dharma exists.

Religion Divides the people But Dharma unites. Dharma is the soul of India and is secular in that secularism a inseparable part of Dharma. Dharma: Truthfulness, to be free from anger, sharing wealth with others (Samvibhaga), forgiveness, procreation of children from one's wife alone, purity, absence of enmity, straight forwardness and maintaining persons dependent on one self, are the nine rules of the Dharma of persons belonging to all the varnas. (Mahabharat Shantiparva 60-7-8). So we conclude that Dharma is far all and is a set of moral values to practice in one's daily life, where as Religion is belief and is a system of worship of certain group of people living in society. The National ideals of India are renunciation and service. Intensify her in those channels, and the rest will take care of itself.

Coronation oath to obey Dharma.

In order to commit the King to discharge his duties satisfactorily the principal of administering an oath to him at the time of his coronation was in practice.(Mahabharat by Sages to King Vainya)

The most ancient provisions show how in this land, where Vedas were regarded as supreme, the disbelievers in Vedas were respected and required to be protected. The above constituted the charter of equality in Rajadharma from ancient times and are now incorporated in Articles 14, 15, 16, 17, 21 and 25 of our Constitution. Thus secularism par excellence was one of the elements of Dharma.

The majority nationalist members in the Constituent Assembly played a pivotal role to shape our constitution on the basis of Bharatiya values, culture and tradition as far as possible. With their constant efforts Vande Mataram as National Song continued alongside Jana Gana Mana Adhinayaka as National Anthem.

This generation and the future generation must read the history framing of our Constitution drafted by Dr Baba Saheb Ambedkar in an ambit of new research. So that myths about Constitution can be eradicated. In conclusion we can say that the impact and significance of the Bharatiya values on our Constitution is crystal clear. Either it can not be denied or undermined. ❑❑

Ref: 1. Origin of State, Its ideals and duties by Justice Dr M RamaJois; 2. Be immortal by Justice Dr M RamaJois; 3. Article in a link http://www.slideshare.net/slideshow/embed_code/30459044

G-20 and Crypto-Currency Regulation

Bharat has got the responsibility to lead the G-20 from 1 December 2022 to 30 November 2023. This group started as G-7 and today it is G-20. The necessity of a new organization to manage the global economic and financial system to avoid any global economic and financial crisis was accepted as the existing organizations such as World Bank (WB), International Monetary Fund (IMF), and the World Trade Organization (WTO) were ineffective to accomplish the committed intended goal. The immediate trigger was a sequence of economic and financial crises starting from the Mexican Peso crisis of 1994, Asian financial crisis of 1997, Russian financial crisis of 1998, and impacting the American hedge fund resulting in the collapse of Long-Term Capital Management (LTCM). LTCM was founded in the year 1994 and it is surprisingly said that the LTCM was incorporated by those people who were successful in the classroom but failed in the boardroom. The board member and co-founders of LTCM included Dr. Myron Samuel Scholes and Dr. Robert C. Merton who together received the Nobel Memorial Prize in Economic Sciences of the year 1997. The four-year story is that the LTCM was founded in 1994, the co-founders of LTCM received Nobel Prize in 1997 and the LTCM collapsed in 1998. The shelf life of international organizations is diminishing at a faster pace. The fault line is in policy making and cooperation.

The G-20 meetings have highlighted the issue of regulating cryptocurrency. We should be very careful in demanding that international regulatory bodies regulate the transaction behavior using cryptocurrency. The developed countries, particularly the technologically developed countries can come up with their own regulatory technology to control the behavior of crypto exchanges and the role of the behavior of crypto-currency in economical distortion and financial distortion. But in case we lag behind in coming up with our own technology to regulate cryptocurrency then the expected cooperation from

If the list of doable issues which consume a lesser timeline is taken separately, then more than expected can be achieved by G-20 in a year.
Alok Singh

developed nations of G-20 or any nation of the group that succeeds in developing a control and regulation mechanism can be a disappointment. We have already faced disappointments in WTO and other international organizations.

The latest crisis which the whole world faced is the COVID-19 pandemic. We need to replicate the success of pandemic management in crypto- currency-management. We should remember that had we been not able to develop our own Covaxin - developed and manufactured by Bharat Biotech, then what would have happened? The world listened to us as we gave the world the free vaccine and earned vaccine diplomacy. We cared for the world but the world didn't care for anyone. We were lucky to have a leader who had trust in our own human resources, working in our own motherland and for our own companies, those who could match the timeline of the Covid-19 vaccine deadline as that of the other greedy big pharmaceutical companies and better-equipped world universities could do. The scope of international organization like the World Health Organization and the United Nations were hopeless, and could do nothing and was literally ineffective in persuading the other or expected early developer of the Covid-19 vaccine to share the vaccination technology or to temporarily waive the patent. We rescued the world. Our own 'Covaxin' demolished the monopoly of the Covid-19 vaccine and saved the human civilization of the world.

Nothing substantial was contributed by international organizations during the pandemic of Covid-19 on the humanitarian ground when the world was dying. We can easily extrapolate the experience of Covid-19 experience to address the already-arrived crypto-currency disruptions. We saved the world then, as we had Covaxin as well as we had CoWin. Covaxin is the product while Cowin is the logistics platform. We should note that without 'CoWin', 'Covaxin' could not succeed. The planning was meticulous and the world is surprised and the global citizens thanked us. We need the same level of commitment to address the crypto-currency disruptions.

We expect the leadership to encourage with urgency our universities and technology companies to bail out our outdated regulators with a control and regulation mechanism which could demolish the disruptions of crypto-currency to our economic and financial system. It's very difficult to stop a technology to arrive, the crypto-currency technology has arrived and we should engage our energy to develop regulatory mechanisms. It's foolish to expect that another nation of the G-20 will share with any other nation of the G-20 the mechanism to regulate and control crypto-currency. We have to lead and provide the solution to the sovereign nations the means, ways, processes, and mechanisms to control and regulate the crypto-currency. Meanwhile, a temporary ban is the only alternative.

The international priority list is of regulating crypto-currency but in the chairmanship of our country, the G-20 forum can achieve a lot that we have to offer to the world and can be achieved during the leadership of our country. It is difficult to stop an idea or technology whose time has arrived, and is beneficial to mankind; the unpreparedness of regulators is a tough excuse to discourage such ideas. The solution lies in preparing the regulators to match the expertise of technological disruptions by following proper policy and sensing the urgency. During Covid-19 we did it and in cryptocurrency, we can repeat the success, proper discussion, appropriate policy, and sufficient encouragement are needed. Our hidden human resource is capable enough. Politicians and bureaucrats need to have the knowledge to face the challenges of techno-savvy world where the product life of disruptive technology itself is getting lesser and lesser.

The acceptance of Ayurveda as a mainstream part of medical tourism can follow, as the acceptance of Yoga is an accomplished goal. This platform can be engaged to encourage organic and traditional farming worldwide. The one earth one family which is our idea motivates us to own the responsibility to discourage the commercialization of food we eat and get support from G-20 nations to discourage the promotion of Genetically Modified and ultra-processed foods. These practices are inclusive components of having responsible behavior towards climate and environment.

There are many issues that can be addressed in the short time frame of one year, and we should be careful that in the aim of striking the bigger issues the smaller but doable issues are not lost. If the list of doable issues which consume a lesser timeline is taken separately, then more than expected can be achieved by G-20 in a year. ❑❑

(Alok Singh is a Fellow of the Indian Institute of Management Indore, a freelancer academician, and associated with AGET Business School, Jhajjar.)

Science of Genetic Modification

Recently there has been controversy over GM Mustard where Government is considering introducing harvesting GM mustard primarily to produce bumper crops of mustard to reduce oil imports on which our country heavily depends. We have already known misfortunes of genetically modified BT Cotton. Simultaneously several organizations are opposing it on several grounds including climate and health hazards of genetically modified crops, costly seeds monopolised by foreign producers and several countries having banned GM crops. People in general are wary of GM crops as they are engineered in a lab and do not occur in Nature.

Genetic Modification is a technology that involves inserting DNA into the genome of an organism. To produce a GM plant, new DNA is transferred into plant cells. Usually, the cells are then grown in tissue culture where they develop into plants. The seeds produced by these plants will inherit the new DNA. Genetically modified organisms (GMOs) are plants, animals, or microorganisms whose genetic makeup is artificially modified or altered. Individual genes can be introduced from one organism to another across species. GMOs have several purposes including resistance to certain environmental conditions, pests, and diseases or resistance to chemicals such as herbicides. Some crops are genetically modified to increase their value. Despite biotech industry promises, no evidence shows any GMOs currently on the market showing increased yield, enhanced nutrition, drought tolerance, or any other consumer benefit. The safety of GMOs is generally unknown. There is a lack of credible independent long-term feeding studies. An increasing number of people around the world are choosing to eat organic and non-GMO products.

There are 3 main types of genetic modifications :

1. Transgenic – Plants have genes inserted into them that are derived from other species.
2. Cisgenic – Plants are made using genes of the same species or closely related.

Human life is more important than economics of edible oils and certainly more precious than GM mustard or any other genetically modified edible oilseeds.
Vinod Johri

3. Subgeneric – To alter genetic formation of a plant without incorporating genes from other plants.

The characteristics of all living organisms are determined by their genetic makeup and its interaction with the environment. The genetic makeup of an organism is its genome, which in all plants and animals is made of DNA. The genome contains genes, regions of DNA that usually carry the instructions for making proteins. It is these proteins that give the plant its characteristics. For example, the colour of flowers is determined by genes that carry the instructions for making proteins involved in producing the pigments that colour petals.

Genetic modification of plants involves adding a specific stretch of DNA into the plant's genome, giving it new or different characteristics. This could include changing the way the plant grows, or making it resistant to a particular disease. The new DNA becomes part of the GM plant's genome which the seeds produced by these plants will contain.

The first stage in making a GM plant requires transfer of DNA into a plant cell. One of the methods used to transfer DNA is to coat the surface of small metal particles with the relevant DNA fragment, and bombard the particles into the plant cells. Another method is to use a bacterium or virus. There are many viruses and bacteria that transfer their DNA into a host cell as a normal part of their life cycle. For GM plants, the bacterium most frequently used is called Agrobacterium tumefaciens. The gene of interest is transferred into the bacterium and the bacterial cells then transfer the new DNA to the genome of the plant cells. The plant cells that have successfully taken up the DNA are then grown to create a new plant. This is possible because individual plant cells have an impressive capacity to generate entire plants. On rare occasions, the process of DNA transfer can happen without deliberate human intervention. For example, the sweet potato contains DNA sequences that were transferred thousands of years ago, from Agrobacterium bacteria into the sweet potato genome.

There are many viruses and bacteria that transfer their DNA into a host cell as a normal part of their life cycle. For GM plants, the bacterium most frequently used is called Agrobacterium tumefaciens.

Risks and Controversies Surrounding the Use of GMOs

Despite the fact that the genes being transferred occur naturally in other species, there are unknown consequences to altering the natural state of an organism through foreign gene expression. After all, such alterations can change theorganism's metabolism, growth rate and response to external environmental factors. These consequences influence not only the GMO itself, but also the natural environment in which that organism is allowed to proliferate. Potential health risks to humans include the possibility of exposure to new allergens in genetically modified foods, as well as the transfer of antibiotic-resistant genes to gut flora.

Horizontal gene transfer of pesticide, herbicide, or antibiotic resistance to other organisms would not only put humans at risk, but it would also cause ecological imbalances, allowing previously innocuous plants to grow uncontrolled, thus promoting the spread of disease among both plants and animals. Although the possibility of horizontal gene transfer between GMOs and other organisms cannot be denied, in reality, this risk is considered to be quite low. Horizontal gene transfer occurs naturally at a very low rate and, in most cases, cannot be simulated in an optimized laboratory environment without active modification of the target genome to increase susceptibility.

In contrast, the alarming consequences of vertical gene transfer between GMOs and their wild-type counterparts have been highlighted by studying transgenic fish released into wild populations of the same species. The enhanced mating advantages of the genetically modified fish led to a reduction in the viability of their offspring. Thus, when a new transgene is introduced into a wild fish population, it propagates and may eventually threaten the viability of both the wild-type and the genetically modified organisms.

Unintended Impacts on Other Species: The Bt Corn Controversy

One example of public debate over the use of a genetically modified plant involves the case of Bt corn. Bt corn expresses a protein from the bacterium *Bacillus thuringiensis*. Prior to construction of the recombinant corn, the protein had long been known to be toxic

to a number of pestiferous insects, including the monarch caterpillar, and it had been successfully used as an environmentally friendly insecticide for several years. The benefit of the expression of this protein by corn plants is a reduction in the amount of insecticide that farmers must apply to their crops. Unfortunately, seeds containing genes for recombinant proteins can cause unintentional spread of recombinant genes or exposure of non-target organisms to new toxic compounds in the environment. The now-famous Bt corn controversy started with a laboratory study by Losey *et al.* (1999) in which the mortality of monarch larvae was reportedly higher when fed with milkweed covered in pollen from transgenic corn than when fed milkweed covered with pollen from regular corn. The report was followed by another publication suggesting that natural levels of Bt corn pollen in the field were harmful to monarchs.

Unintended Economic Consequences

Another concern associated with GMOs is that private companies will claim ownership of the organisms they create and not share them at a reasonable cost with the public. If these claims are correct, it is argued that use of genetically modified crops will hurt the economy and environment, because monoculture practices by large-scale farm production centreswill dominate over the diversity contributed by small farmers who can't afford the technology.

Why is there tough opposition to GM crops?

1. Genetically engineered foods often present unintended side effects. Genetic engineering is a new field, and long-term results are unclear. Very little testing has been done on GM food.
2. Some crops have been engineered to create their own toxins against pests. This may harm non-targets such as farm animals that ingest them. The toxins can also cause allergy and affect digestion in humans.
3. GM crops are modified to include antibiotics to kill germs and pests. When we consume them, these antibiotic markers will remain in our body and will render actual antibiotic medications less effective over a period of time, leading to superbug threats. This means illnesses will become more difficult to cure.
4. Besides health and environmental concerns, certain pointson social and economic issues have been raised. They have voiced serious concern about multinational agribusiness companies taking over farming from the hands of small farmers.
5. Farmers are reluctant because they will have limited rights to retain and reuse seeds. Dependence on GM seed companies could prove to be a financial burden for farmers.Their concern also includes finding a market that would accept GM food.

We produce more food today without the use of GM technology than is required to feed the world population, and we do not need GM technology to take care of future food requirements.

In the European Union several countries have banned GMOS i.e. France, Germany, Austria, Greece, Hungary, the Netherlands, Latvia, Lithuania, Luxembourg, Bulgaria, Poland, Denmark, Malta, Slovenia, Italy, and Croatia. In Africa, Algeria and Madagascar have banned GMOs, and in Asia, Turkey, Kyrgyzstan, Bhutan, and Saudi Arabia. Belize, Ecuador, Peru, and Venezuela have all banned GMOs. The United States has no official legislation banning GMOs.

Government has taken several steps to help oil seed farmers, increase crop area and developing new high yield variants of oil seeds. A financial outlay of Rs.11,040 crore has been made for boosting palm oil production.It is proposed to cover an additional area of 6.5 lakh hectare for oil palm till the year 2025-26 and thereby reaching the target of 10 lakh hectares ultimately. The production of Crude Palm Oil (CPO) is expected to go upto 11.20 lakh tonnes by 2025-26 and upto 28 lakh tonnes by 2029-30.

We produce more food today without the use of GM technology than is required to feed the world population, and we do not need GM technology to take care of future food requirements. We have virtually no testing of GM crops for safety on humans and certainly not on long term testing of harmful biological effects of genetic modification on humans. Human life is more important than economics of edible oils and certainly more precious than GM mustard or any other genetically modified edible oilseeds. ❑❑

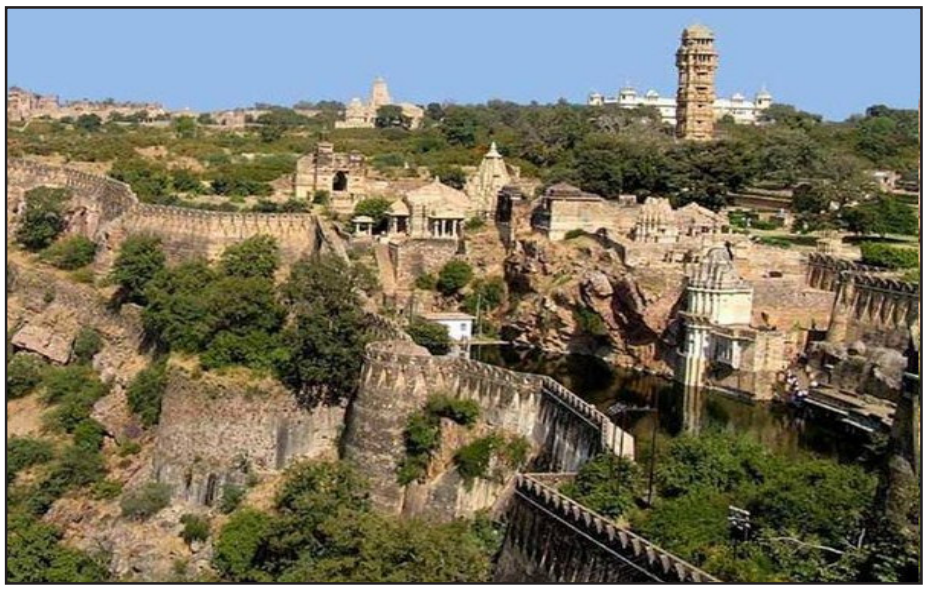
Vinod Johri: Retd. Additional Commissioner of Income Tax, Delhi

Mewar as the Locus of Guhila State (Part-VII)

The Atapura inscription of King Saktikumâra of AD 977, which lists the Guhila queens of the Rästrakütas (Rästrakûta of Hastikundi), Cähamânas, and Huna lineages indicates the presence of these Rajput chiefs in the Mewar hills. We have already stated the possibility of the presence of these Rajput chiefs at strategic points. Therefore, the most obvious support that the Guhilas received from these local, Rajput chiefs was military in nature. B.D. Chattopadhyaya notes the presence of similar military support from the Cähamânas, Caulukyas and minor Pratihâra lineages to the Gurjara-Pratihâra royal family in a much larger territorial context. The settlement of external Rajput elements not only indicates political integration of the local chiefs but also a system of checks against the local chiefs. Matrimonial alliances with Rajput royal families from Hastikundi and central India are likely to have drawn some affinal kin to Mewar, facilitating the organization of a network of Guhila power. However, kinsmen of the royal family evidently occupied higher posts in the military apparatus. The point is supported by two epigraphical records of AD 1000 and AD 1008. They speak of a Guhila mahâsâmant- Adhipari (chief of the big samantas) of Nagahrda (Nagda). If Guhilas occupied the posts of mahâsâmantadhipati, non-Guhila Rajput chiefs were the other samantas.

Secondly, unlike the simple reference to the chief leader (apparently commander of troops) in the seventh century record Nagda-Aha a records refer to the formal title, mahâsâmant- adhipati for the first time in the late tenth and early eleventh century. The other significant facet of the military apparatus would be the chain of fortresses newly constructed, or captured to guard both the core-area of the state as well as the peripheral belt. Atapura, the newly constructed

The Guhila state of Mewar attained military and political heights as well as a religious landmark , Nagda and Eklingji temple by the tenth century.
Prof. Nandini Kapur Sinha



capital town at Aha a in tenth century, must have necessitated a chain of fortresses particularly on its northern, north- eastern and southern sides (the western side was guarded by hills and forests). Unfortunately, the lack of direct evidence except for the presence of Ki°kindhapur in the Chhappan area, deters us from mapping out such centres. However, the presence of newly inducted Rajputs such as the Hünas (central India), Pratihâras or Rästrakütas (Hastikundi) may indicate the construction of new strongholds. The repeated fall of Ahada in the late tenth century to Cähamana and Paramâra incursions possibly suggest that the line of defence was still not strong. Yet, the state territorially expanded in the late eleventh century, and some of the local strongholds were definitely annexed in the Godwar region, to hold the strategically and commercially important Pali.

Nadol (seat of Nadol Cahamanas) was captured by Jaitrasimha in the early thirteenth century which apparently extended the line of defence particularly for the Nagda-Ahada belt. Finally Jaitrasimha's capture of Chittaurgarh evidently brought a number of neighbouring local fortresses under Guhila control. Atapura inscription of King Úaktikumâra claims Guhila ancestor Guhadatta as a son of a brahmana family which had emigrated from Anandapura (Anandapuravinirgatah Viprakulähnandanoh-mahideva jayati Sri Guhadattah prabhavah Œri Guhilavamœasya). The Kadmal Plates of King Vijayasimha of late eleventh century also repeated the tenth century claim to the brahmana status of the Guhila. Now the question is why it was necessary to invent a myth of migration from Gujarat to Mewar. We must remember that the Guhilas never associated themselves with Anandapura or Gujarat before 900. The answer lies in the desire to legitimize the hold of the Nagdä-Aha a Guhilas over their recent territorial acquisition.

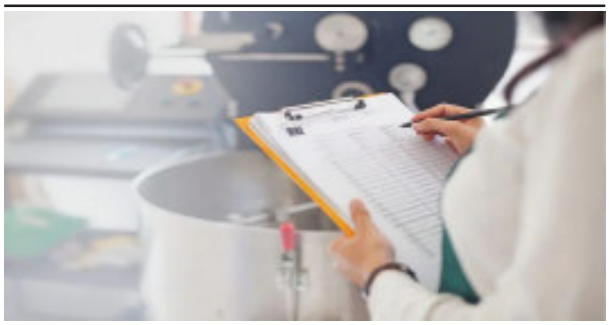
The details of the answers are hidden in the popular annals of Mewar. The transition of power from the Bhils to Nagdä-Ahada Guhilas recorded in the traditions of Mewar have already been mentioned. It was imperative for the state to officially ignore the fact of subjugation of the Bhils as they had been made subordinates in their own land.

Secondly, the Guhilas had also established their predominance over a number of non-Guhila Rajput chiefs of the locality through territorial integration by the tenth century. Hence, the introduction of a migration myth linking the Guhilas with the prestigious Anandapura brâhmaGas furnished the task of legitimization of Guhila power over the entire sub-region of the Mewar hills and parts of upper Banas plain. Legitimization was sought by association with a respectable brähmaGa family from Anandapura in Gujarat officially proclaimed for the first time in Atapura Inscription of AD 977. The popular annals of Mewar claim that Guhadatta, the founder of the ruling lineage, was the posthumous son of the last Maitraka King Siladitya of Valabhi. This not only lent respectability to the Nagda-Aha a Guhilas but also helped in tracing migration roots from outside Mewar hills.

It is interesting that legends also claim that Guhadatta was brought up by a brâhmaGa of Birnagar (Kamlavati) of Nagar gotra. She was instructed to bring him up as a brâhmaGa, but to be married off to a Rajputani, just as it was necessary for the Nagda-Aha a state to take recourse to political symbols to legitimize power in Mewar hills in tenth century, it was equally expedient to associate itself with a religious landmark signifying beginnings of religious dimension of the process of state formation. The Guhilas sought affiliation with Nägahda, an emerging Pasupata centre in Mewar hills and through patronage of their cult, Ekalinga.

The construction of the royal and magnificient temple of Ekalinga is recorded in inscription of AD 971. It was constructed in the reign of Naravahana at the instruction of Pasupata acaryas such as Supujitarasi, Vimicitarási, etc., on the Trikûta hills at Nägahrda. This inscription mentions the famous Käyävarohana episode (the story of Siva's incarnation at Karvana, Gujarat), the story of the origin of Lakulisa Pasupata sect. The episode is a description of Œiva incarnating himself on the earth at Käyävarohana in Bhrgukaccha (Broach district, Gujarat). This incarnation evidently refers to Lakulisa, the founder of Pasupata sect of Saivism. He was followed by disciples Kusika and others. The inscription records another very significant statement. It states that Sri Bappaka established himself at Nägahrda. For the first time, the Bappa Raval of the legends, figures in official records of the Guhila. He is mentioned in association with Nagahrda, a Pasupata centre in tenth century. ❑

FSSAI's draft regulation on star rating of food items favour industry, demands revised norms: SJM



The Swadeshi Jagran Manch (SJM) urged the Food Safety and Standards of India (FSSAI) to introduce revised norms on front-of-the-pack nutrition labelling, claiming the provisions in the draft regulation reflected "industry influence" and did not serve public interest.

The organisation believes that the draft regulation "favours" the food industry and not public health, SJM alleged in a written submission to the FSSAI, raising objections to the proposed regulation.

In September, the FSSAI issued a draft regulation for the front-of-package labelling (FOPL) of foods for packaged food companies and sought comments from stakeholders. The proposed regulation seeks to introduce the concept of placing five-star ratings on packaged food items to inform consumers about their nutritional value.

The SJM said in its letter to the FSSAI that FOPL should be simple, easy to understand, truthful and implemented at the earliest so that consumers could make an informed choice.

However, the draft regulation has proposed to classify food products as "least healthy to healthiest", which "sounds misleading", SJM said.

"The FOPL with stars is not helpful at all. Nobody can understand if a food with 2 stars has sugar or salt more than recommended," Mahajan said, adding "the SJM would like to understand more from FSSAI about how on earth can an ultra-processed food product be classified like that".

The SJM claimed that the food industry occupied "a majority seat, nearly 70-80 percent" throughout the stakeholders' meetings at the FSSAI.

"The SJM strongly objects to the food industry being invited to deliberate and decide on what the food labelling policy should be," SJM said.

If at all the FSSAI needed to consult the food industry, the scientific panel may have called their representatives, listened to their views, recorded them and made them public, SJM added.

"The FSSAI needed to keep up to the Food Safety Act," SJM said.

SJM noted that the draft regulation was based on a report by the Indian Institute of Management (IIM)-Ahmedabad, which favoured Health Star Rating (HSR) on packaged food items as the "best option" for India.

"The IIM report is not acceptable for policy development. The FSSAI had biased IIM researchers towards the proposal of the HSR," the SJM said.

The IIM's report has been "criticised and rejected" by both Indian and global researchers, it added.

"The SJM, therefore, urges you to take steps to revise the regulation in such a way that the FOPL would provide health related risk warnings pertaining to high sugar, salt or saturated fats," SJM said in his letter.

"We do understand that the star rating cannot give this clear and true alert to a consumer who is increasingly influenced by health claims of the food industry via media promotion. And if they (food products) get stars on unhealthy foods, they will end up making more money on the cost of our people's health who eat these foods not knowing they are unhealthy," SJM added. Most countries that have adopted the FOPL have chosen to give warning labels instead of health-star ratings, except New Zealand and Australia, the SJM added.

"Experience in Australia is also now being questioned and the Australian government is giving a rethink on the issue," SJM added.

https://www.cnbctv18.com/business/fssai-draft-regulation-on-star-rating-of-food-items-favour-industry-sjm-demands-revised-norms-15206771.htm

FSSAI proposed star-rating system misleading: Experts

The plan of the Food Safety and Standards Authority of India (FSSAI) to introduce star ratings for packaged food has attracted sharp criticism from public health campaigners who dubbed the proposal as a flawed one that not only fails to convey the risk of consuming junk food but also misleads people to believe that even food items containing high fat, sugar and salt have benefits. Also, the draft regulation

gave the food industry 48 months to switch without taking into account public harmful consequences of such a decision, allowing producers of common health drinks to escape regulation, a section of doctors and public health workers said.

The FSSAI in September came out with a draft notification on front-of-pack nutrition labelling for food products, arguing that such labels, once introduced, can aid consumers to determine if a particular food is healthy to eat. The draft notification came after a decade of deliberation on the pros and cons of such labelling.

Yet the FSSAI went ahead with an unscientific rating system in which a product is awarded stars on the basis of its ingredients. Junk foods like potato chips, colas and biscuits will get less number of stars, but their ratings would improve if they add fruits, nuts and vegetables to the final product. Such a rating system, experts say, is completely flawed.

"There is no scientific evidence that adding a positive factor or nutrient like vegetable/fruit/ nuts to an unhealthy food product would reduce risks of disease. Body metabolism does not function that way. Neither nuts/fruit/legumes can reduce the absorption of sugar/salt or fat in the unhealthy product nor its negative impact," said Arun Gupta, convener of Nutrition Advocacy in Public Interest, a think-tank on nutrition policy.

What such a rating system would convey to an ordinary consumer is that even a pack of potato chips or biscuits and a bottle of cola will have some health benefits as they would be given half a star or one star. The token addition of some positive nutrients like fruits, nuts and fibre could substantially increase their rating without in any way mitigating their adverse effect on health. And there is no provision for labelling any food item as unhealthy.

Swadeshi Jagran Manch also opposed such a rating system. The Star Rating could not give a clear and true alert to a consumer who would be influenced by health claims of the food industry via media promotion, SJM wrote to the FSSAI last week.

"The basic intent is to show all food products as healthy, instead of declaring warnings against foods that are clearly accepted as being unhealthy," said Vandana Prasad, member of NAPI and a public health professional.

Critics pointed out that they were not against the front-of-pack-labelling, but wanted the regulator to make such labels correctly rather than succumbing to the industry pressure.

"Warning labels will also empower customers to make healthier choices and contribute to the prevention of the most concerning diet-related non-communicable diseases in India," said AshimSanyal, chief operating officer, Consumer Voice.

https://www.deccanherald.com/national/fssai-proposed-star-rating-system-misleading-experts-1165159.html

GM mustard: Crop's release would irreversibly damage the environment, SC told

The Supreme Court of India on November 30, 2022, heard arguments challenging the Centre's go-ahead to environmental clearance for genetically modified (GM) mustard. There may be irreversible contamination of the environment following unknown consequences once the crop is released, the court was told.

Advocate PrashantBhushan, representing petitioner Aruna Rodrigues, presented a detailed argument to the SC against the approvals. Other activists like GM Free India coalition have also filed petitions against the GM crop.

Dhara Mustard Hybrid (DMH-11) is a hybrid seed variety that has stirred a storm between scientists, farmers and activists over its commercialisation. It is the first GM crop to be commercially released and grown by farmers in India.

The issue has taken a front seat after the central biotech regulator, Genetic Engineering Appraisal Committee (GEAC), approved environmental tests for the GM crop October 18.

The coalition approached the Supreme Court on November 2, seeking a reversal of the decision. However, the government of India, in its affidavit, informed the SC that the GM seeds were sown in six locations for environmental trials before Nov. 3.

After repeatedly informing the SC that no approvals were given for the crop, the court was sud-

denly informed in October that the environmental clearances were given, Bhushan argued.

Mustard is widely used in India and is central to crop biodiversity, the advocate told the court. The GM crop is a herbicide-tolerant variety and toxic chemicals sprayed and absorbed by the plant would pose health concerns for the persons consuming it. The use of herbicide cannot be controlled or regulated by farmers, Bhushan said.

Apart from creating GM mustard, a new gene is also created, which enables the plant to create new proteins. This may lead to issues such as allergenicity, toxicity and the development of superweeds that are extremely resistant to herbicides, the advocate argued.

Bhushan also referenced the court order dated May 10, 2012 — Aruna Rodrigues v Union of India — citing there would be contamination of the environment using GM crops. There is a 0.01 per cent chance of contamination as per the order, which is a serious issue, the advocate told the jury members. This is the reason most European countries have banned genetically modified organisms.

Recommendations made by the GEAC in its 147th meeting held October 18, 2002 were also cited by him. The recommendations stated that effects of GM mustard on honeybees and other pollinators will be examined after its environmental release.

Once released, there will be irreversible contamination in the environment following unknown consequences, Bhushan said. He further raised the observations made by the Technical Expert Committee (TEC) June 30, 2013, appointed by the Supreme Court regarding the approval of BtBrinjal, another GM crop.

"The TEC had recommended a moratorium on field trials for BtBrinjal in food till we develop a better understanding & regulatory system," he said, citing the panel's report.

A 10-year moratorium on field trials of transgenic Bt Brinjal was suggested by the TEC in its interim report, the advocate argued. But in its final report, the panel recommended an indefinite and blanket ban on herbicide-tolerant crops.

Known carcinogens like herbicides glyphosate and glufosinate are commonly used for the preparation of GM mustard. "In the US, the company that manufactures herbicides, also produces herbicide-tolerant plants. There are so many health problems in the US," Bhushan said.

The advocate also brought up professor PM Bhargava, eminent molecular biologist and founder director of the Centre for Cellular and Molecular Biology, who criticised GM crops before the Parliamentary Standing Committee on Agriculture.

Bt Brinjal was hurriedly approved, Bhushan quoted from Bhargava's deposition. Observations by the department-related Parliamentary Standing Committee on Science and Technology, Environment & Forests (Rajya Sabha) report 301, published 2017, were also quoted by the advocate.

The committee noted there was haste to commercialise GM crops in India and without scientific proof on it being safe for human health, the government should reconsider its decision, the report said.

"If GM crops are allowed in the midst of other indigenous farming, there is no way contamination can be stopped," Bhushan read from the report. "Once contamination happens, the crops are no longer organic. Will definitely affect exports."

The environmental trials of GM mustard must be stopped, Bhushan said while resting his case. "The seeds have already germinated and will flower in some weeks. Wherever they have planted the GM mustard seeds, the plants must be uprooted at once," he said.

The TEC report in 2013 identified major gaps in the regulatory system that remained unaddressed to date, submitted advocate Sanjay Parikh, appearing for Gene Campaign, another petitioner in the case. Until they are attended to, it is unadvisable to conduct field trials, he added.

He also questioned GEAC's authority to approve the crop despite being an appraisal committee.

GEAC in 2018 directed field demonstration in an area of five acres at different locations to observe the effect of GM mustard on honey bees and other pollinators and honey and on soil microbial diversity before their environmental release, he stated.

Later, the trials were deferred, and the same committee endorsed its environmental release. The decision to note the effect on the pollinators post-release puts GEAC's independence under doubt, Parikh said. Justice D. Maheshwari asked the advocate to continue his submissions on December 1.

https://www.downtoearth.org.in/news/agriculture/gm-mustard-crop-s-release-would-cause-irreversible-environmental-damage-sc-told-86294

GM Mustard is 'Dangerous'

The BharatiyaKisanSangh and Swadeshi Jagaran Manch (SJM) have appealed to the Government not to give nod to Genetically Modified (GM) Mustard and said the public authority ought to initially take a choice only after holding parleys with stakeholders and experts. Recently, Genetic Engineering Appraisal Committee gave nod to GM Mustard for cultivation in farmers' fields in the country. In a letter to Shri Bhupender Yadav, the Union Minister for Environment, Forest & Climate Change, the Manch has sought the minister's intervention to "ensure that no GM mustard seed is allowed to be planted, now or ever". According to the missive, the Manch has been opposing "this dangerous and unneeded GM mustard being brought in through the backdoor as a 'public sector' GMO". Coming down heavily on the regulatory body, the Manch stated that the regulatory body, did not take up any review of the crop. "The regulators are joining hands with GM crop developers and are time and again compromising the regulatory regime quite seriously, and they have done so with this GM mustard also." The two bodies dismissed the claim that "GM Mustard is Swadeshi and has been developed in India". "We would like to bring it to your kind notice that in 2002, Proagro Seed Company (Bayer's subsidiary), applied for commercial approval for similar construct that Prof Pental and his team are now promoting as HT Mustard DMH 11. Bayer's application at that point of time was turned down because (ICAR) said that their field trials did not give evidence of superior yield. As is well known, the hybridization of GM Mustard is achieved by means of the two genes barnase and barstar, derived from a soil bacterium called Bacillus amyloliquefaciens. Bayer is not a Swadeshi company. How can a product patented in their name is termed as Swadeshi?"

According to the Manch, Bayer owns the patent of the genes used in Prof Pental's Mustard has been deliberately concealed from the people of India. Dismissing another claim that GM Mustard will increase domestic production and reduce our import dependence, the Manch said the GMO mustard has no yield advantage compared to Indigenous hybrids.

In a scathing attack, the Manch stated that the regulators had kept the condition of royalty payment by the developer to Bayer has been kept a secret. "Not only that GMO Mustard is based on Bayer's patented Barnase-barstar-barnase gene system for which royalty shall be paid, it is said to promote usage of Glufosinate, an herbicide from which Bayer will benefit the most through its existing brands. Therefore, it is evident beyond doubt that the nation would be seriously dependent upon MNC for usage of patents and import of herbicides causing greater outflow of valuable Foreign exchange from the country." It needs to be remembered that GM Mustard has never been tested as a herbicide tolerant crop at all, while even the development of this glufosinate-tolerant crop was in violation of India's pesticides regulations. The yield data was rigged and evidence about this has been shared with the regulators by alert citizens and experts. Importantly, major mustard-growing states of India were opposed to GM crops in general, and this particular GM mustard and had not even allowed for field trials to take place.

https://organiser.org/2022/11/26/99862/bharat/gm-mustard-is-dangerous/

India proposes guidelines to combat fake online reviews & ratings

India launched a crackdown against fake consumer reviews and unverified ratings in a bid to make the online world and e-commerce more authentic and less misleading for users. The government has drafted guidelines for companies from Alphabet Inc's (GOOGL.O) Google, Meta Platform's (META.O) Facebook and Instagram, and Amazon.com Inc (AMZN.O) to travel sites and food delivery apps that depend on reviews to validate products and services. Positive reviews help generate sales and interest from potential buyers.

Some companies have been criticised by consumers and industry experts for downplaying negative reviews, or accepting fake ratings, making the vetting process difficult for buyers. The named companies did not immediately respond to a Reuters email seeking comment. "Feedback mechanisms such as reviews are essential for consumer interest. We welcome the steps being taken by the government ... and are obliged to be a part of the constituted committee," said a spokesperson for Zomato. The Department of Consumer Affairs set up a committee in June to develop a framework for checking fake and deceptive reviews in e-commerce, the Ministry of Consumer Affairs, Food & Public Distribution said.

"The new guidelines for online reviews are designed to drive increased transparency for both consumers and brands and promote information accuracy," said Sachin Taparia, founder of LocalCircles, a community platform and pollster which made the initial submission to the Department of Consumer Affairs & was part of the committee drafting the guidelines.

"As far as platforms like Google and Facebook go, the new rules will require them to validate the real person behind the review through specified 6-8 mechanisms which means fake accounts created just for review writing will go away over time or won't be able to review," said Taparia. Full details of the proposal are not yet public.

"We do not want to bulldoze this. We will first see voluntary compliance of these guidelines. And if we see the menace continues to grow we may make this mandatory," Rohit Kumar Singh, secretary of the Department of Consumer Affairs, told reporters in New Delhi. The Bureau of Indian Standards will assess compliance, the ministry said. Online companies say they have internal checks in place to combat fake reviews, but currently failure to do so is not a compliance breach. If the guidelines become mandatory, companies could face action for unfair trade practice, for suppressing negative reviews or for enabling planting of fake reviews, Taparia said.

https://www.reuters.com/technology/india-proposes-framework-combat-fake-online-reviews-ratings-2022-11-21/

India's non-GMO mandate hurts our exports, US to WTO

In a fresh complaint at the WTO against India's mandatory non-GMO (genetically modified origin) certification requirement for food , the US has said that implementation of the order had caused trade disruptions for American exports, especially apples and rice, and should be immediately withdrawn. India has stated that the requirement to regulate the import of "GM" food is not new, as outlined in the Environmental Protection Act, and that the requirement has not caused trade disruptions. The US, however, pointed out in its complaint that reality was different.

"The US must stress that the requirement of a non-GM certificate on a consignment basis was first ordered in 2020, and since its entry came into force, the order has caused trade disruptions for US exports, most notably apples and rice," according to the submission made by the US to the WTO SPS Committee on November 11.

WORLD TRADE ORGANIZATION

'Withdraw measure': It urged India to immediately withdraw the measure and reiterated its desire to engage in technical cooperation with food standards statutory body FSSAI.

The FSSAI has required a mandatory non-GMO and GM-free status certificate from exporting countries for 24 listed food products, from March 1, 2021. The items include pineapples, apples, wheat, rice, tomato, potato, maize, melon, plum, papaya, potato, egg plant, bean, among others. US companies find it difficult to adhere to the certification requirement as the country has no restrictions on GM food. In its submission, the US noted that India still refused to furnish an explanation of the scientific basis and risk assessment which justifies this non-GM certificate requirement on a consignment basis.

"The US asserts that instances of compliance by other countries, and India's own issuance of similar certificates, do not constitute sufficient justification for this order, and furthermore the order must be notified to the SPS Committee," it said. ❑❑

https://www.thehindubusinessline.com/economy/us-says-indias-non-gmo-certificate-requirement-hurt-its-apple-rice-exports/article66149396.ece

Swadeshi Activities

Yuva Savrojgar Mela

Meeting (Delhi)

Pictorial Glimpses

Swavlambi Bharat Abhiyan (SBA)

Meetings

Maharashtra

Mohali, Punjab

Swadeshi Patrika Posted on 7-8 Dec. 2022
at LPC Delhi, Delhi PSO, Delhi RMS, Delhi-06

Regd. RNI No. 65799/97, DL-SW/01/4073/2021-23
Publishing Date: 2-3 Every Month

Swadeshi Activities

Swavlambi Bharat Abhiyan (SBA)

Zila Rojgar Srajan Kendra

Pictorial Glimpses

Printed and published by Dr. Ashwani Mahajan on behalf of Swadeshi Jagran Samiti and printed at Competent Binders, Naveen Shahdara Delhi-32, published at Dharmakshetra, Sector-8, R.K. Puram, New Delhi-110022, editor Ajey Bharti