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Agriculture & Industry Survey

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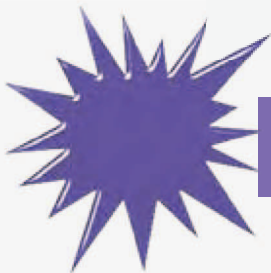
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SUSTAINABLE AGRICULTURE, THE ONLY FUTURE?

An action agenda is drawn up at the Glasgow climate change international summit! Yes, it looks to be the only hope for standing up to the Climate Change Challenge facing the world. The stark message from the world leaders from the COP 26 Summit the just concluded Glasgow summit of climate change meet gives hope and raises expectations of the world leaders who assembled for the G-26 nation's summit during the October-November dates in a sense historical and timely.

The unasked question is whether the world leaders are ready to do the near-impossible targets. After all the cynical reality is that the big powers are the big polluters also. And there would be heavy resistance from the big corporates and other vested interests. We have been living beyond our means and this reality hit the big powers more than the other nations.

One happy outcome of the summit is the new emphasis on agriculture. We now seem to realize and wake up for the climate change threat and also the pollution and other threats to our living environment. The summit has had another important message. It is for the future of agriculture in almost every other small and middle-level country across all continents.

Farming, as everyone knows, constitutes 14 percent of our economy. The annual greenhouse gas (GHG) emissions come from agriculture and agri-related activities like livestock. 55 percent of this harmful gas comes from the livestock sector.

The agri experts who met at the summit have put forward many suggestions for agri reforms. Like Conservation farming and zero budget farming and many more suggestions. The new suggestions are in fact not anymore new but some reiteration of old suggestions only like climate resistance seeds etc.

The many international centers engaged in agriculture and also various branches of farming in various climate zones are all doing very constructive research and also new ideas like the latest rice research institutes. rice seeds etc give hope. But here we like to draw one critical aspect of farming in the new century.

Farming has many agendas. One is the feeding of the world's poor. Hunger and poverty are also great realities in many parts of the world. So how to balance the conflicting targets, feeding the poor and towards this goal we have to produce and distribute and trade in agricultural fields on an equitable basis. Towards this goal we have to work with the UN organizations and the UN itself has to be strengthened and big power politics won't be of much help.

More and innovative research in agri field is also a crying goal. Big agri economies like India and other countries have to turn their attention. For more and bigger research budgets. In the end, there must be bigger publicity and propaganda. For wider awareness on the high priority for agriculture in the countries. Development agenda, agriculture and its future hold such a critical priority that we have to concentrate on rural development issues too.

Climate change, it is said has a political agenda. From the 1648 Peace of Westphalia to this day the concept of sovereignty almost limited the states' Powers. Yet wars didn't go away.

Today the climate change has disrupted the states' powers and anyone can enter into other territories and cause wars. This, anyone, can't do, thanks to the climate threat. This realization must be fed through the countries only through UN agencies.

New ideas and new strategies must be welcomed by the wider world. Let us hope this realization can be brought about in our generation. That would be a great day, indeed!

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Farmers protests prolonged for too long!

One major irritant is the prolonged farmer's agitation that has caused so much destruction and much violence. We refer to the Punjab and Haryana farmer issues. Of course, the Prime Minister has the prime responsibility to resolve this already complicated political, social and economic sector.

Yes, farming and agriculture are the very basic economic issue of India. India as we have always been saying that India is basically an agricultural economy, though as such we are already a strong economy. With a widening manufacturing country, now the defense and strategic sector also receiving high priority, the world has changed.

And India is no exception to this international trend. India politically is a big democracy, why the world's big democracy and this gives India multifaceted advantages to take our place and play our role with extraordinary responsibility.

So far so forth. Yes, the country under the dynamic leadership of Prime Minister Narendra Modi has acquitted well all through his tumultuous days. Having displaced the long-ruling Indian National Congress is of course not easy for many sections accustomed to the rather a sort of laidback "politics as usual" type of all contradictory politics with no democratically elected Congress president nor an electorally elected Prime Minister, we thought that this was the type of Indian dynastic politics that India has evolved.

Came Mr. Modi from Gujarat like thunder and he shook up the old edifice and replace it with an elected alternative democratically elected government that was a novelty in so many senses.

Here is a replaced government that has both elected party president and also an elected Prime Minister. This must have become a new norm and it has. This novelty is troubling so many sections of people, more importantly even the progressive sections.

But difficult to consume the environment which of course lacks some other internal democratic features and yet we have a government on the go.

So far taking a broad view and even with a sympathetic view, we have to concede that, India under the leadership of Modi has performed well both on the domestic and international front. The recent international opinion poll has put Modi on the top of 13 international leaders including Joe Biden, the American President and it is a great honour and recognition for India and in this day and time, we have to

Neither good for farmers nor for the country!

India's profile is rising internationally. India was earning some good grades in the International diplomatic circuit.

The time has come to heal some wounds that are troubling.

shed whatever reservation we may have on Modi rule. Now, coming to some basic issues, the farmers' agitation is prolonging for long and it is no good for anybody to let it go on indefinitely.

It has now become Mr. Modi's personal predilections. That is holding the issue live!

The PM by one stroke can withdraw the controversial laws for another day, right?

Why not? What is preventing Modi to hold on? A sector of people who are India's brave farmers who are looked at in a dispassionate manner is after all have no vested interest in politics and that too in any narrow party politics.

The authorities have stayed the farm laws. For the time being and that means for the indefinite future.

So the Prime Minister can declare openly that his government doesn't take any particular view and in the so long pending issues the government needn't stand any issue of prestige and only in the larger interest of the well-being and future of Indian agriculture the government must withdraw the laws and invite the farmers for a final face-to-face. Goodbye to all the ugly past and a hopefully bright future.

Such a magnanimous gesture from the PM would surely find a positive response from the faint community as well.

Let us hope such gesture and a breakthrough put an end to this very sad and tragic past which saw so many's deaths and destructions and also the shameful conduct of the agitators, of course only the very misguided ones, who indulged in hoisting the flag on the historic Red Fort.

The Indian PM's role now has widened on the international front and India's many enemies would be only disappointed by the PM's timely gesture on the farmers' prolonged agitation and the ugly memories.

We have to call an end to this bad chapter and give a real moral boost to our brave farmers everywhere in all parts of the country.

India's pulses problem: We need real reform

The government needs to revise its pricing policy to incentivise pulses production

India is the largest producer and consumer of pulses in the world. The strange irony is that pulses have to be imported to meet demand, and the general public suffers due to the unusually high prices. The main reason for this imbalance is the half-hearted and ad-hoc price policy of the government.

The Agricultural Costs and Prices Commission, established under the Union Ministry of Agriculture, fixes the minimum support price (MSP) of all agricultural products, including pulses. The MSP is set on the basis of cost of production, position of supply, demand and prices in markets, position of prices relative to other commodities, proper use of natural resources like land and water, economy of the country, and 50 per cent profit on cost of production.



There are several inconsistencies in this arrangement. First, the commission is by status a department whose recommendations are only advisory. Representation of farmers is minimal. The so-called 50 per cent profit to the farmer is not per the government's intended formula, and so it is relatively low. The farmers do not even get the declared MSP.

What's most bizarre is that consumers have to buy pulses at 150 to 200 per cent of MSP. This increases inflation and puts an unbearable burden on the weaker section.

Even more astonishing is that pulses are imported at prices lower than the domestic ones. In order to check consumer prices, the government takes ineffective measures like reducing the storage limit of pulses under the Essential Commodities Act.

For genuine reform, first of all, the MSP formula should be revised and the purchase of each crop in the entire country should be ensured at that declared price. Next, the commission should be given constitutional status, so that its recommendations are binding. A maximum retail price for consumers should be fixed by adding a reasonable profit of 50-60 per cent over MSP to the farmer. All restrictions on transport, storage, trade, processing and export of all agricultural products should be abolished. In case of low domestic production, imports and taxes should be decided after the harvest. All these points are also in the commission's reports.

By Sompal Shastri, Source : www.downtoearth.org

'Kumkum Bhindi': UP's new wonder crop

When ladyfinger goes 'red', it also becomes beneficial and nutritious. The new red variety of ladyfinger, aptly known as 'Kumkum Bhindi', is a wonder crop grown in Uttar Pradesh that will also double farmers' income.

According to agriculture experts, 'Kumkum Bhindi' has 94 per cent polyunsaturated fat which reduces bad cholesterol. Along with it, its 66 per cent sodium content is helpful in controlling high blood pressure, while its 21 per cent iron reduces the chances of anaemia and 5 per cent amount of protein keeps the body's metabolic system in order.

Umesh Saini, a resident of Anwarpur in Hapur, and Murli from Rampurbeh in Sitapur are happy with the cultivation of red ladyfinger.

"Everyone in the village is now thinking about increasing the area under its cultivation this season," Saini said.

According to Bijendra Singh, Vice Chancellor of Acharya Narendra Dev University of Agriculture and Technology, Kumarganj, Ayodhya, this red variety of ladyfinger contains anthocyanins and phenolics that increase its nutritional value.

The crude fibre present in it controls sugar. It also contains a large amount of vitamin B complex.

The ideal time for sowing Kumkum Bhindi starts from February to the second week of April. It can also be sown somewhere around November, the growth will be less in December-January, but fruits will start coming from February, which will be available till November. The prices of early crops are also good.

In the wholesale market, the price of green ladyfinger ranges between Rs 12 to 15 per kg, while red ladyfinger is sold at the rate of Rs 45 to Rs 80 per kg since people are looking at it like a superfood.

Source: economictimes.indiatimes.com

Suicides among farm workers rose 18% in 2020



The number of agricultural labourers who died by suicide in 2020 was 18% higher than the previous year, according to the National Crime Records Bureau (NCRB) report released on Thursday. However, suicides among landowning farmers dropped slightly during the pandemic year.

The NCRB omitted a chapter on Central Armed Police Forces (CAPFs) in the 2020 edition of its Accidental Deaths and Suicides report, without stating any reason. According to the 2019 report, a total of 104 CAPF personnel had lost their lives in various accidents and 36 died by suicide. The cause-wise analysis of suicidal deaths of CAPF personnel in 2019 had shown that 14 were due to family problems and three were due to service related issues. A senior government official said that the 2020

report also planned to include the effect of COVID-19 (infected, recovered and succumbed) on police personnel, but even that was not included in the published version.

The farm sector was one of the few bright spots in the Indian economy last year, recording growth on the back of a healthy monsoon and the continuation of agricultural activities during a lockdown that crippled other sectors. However, landless agricultural labourers who did not benefit from income support schemes such as PM Kisan may have faced higher levels of distress during the pandemic. The NCRB report does not include any indication of the specific causes of suicide among the farm community. Overall, 10,677 people engaged in the farm sector died by suicide in 2020, slightly higher than the 10,281 who died in 2019. They made

up 7% of all suicides in the country. Most of these deaths were among those whose primary work and main source of income comes from labour activities in agriculture or horticulture. In 2020, 5,098 of these agricultural labourers died by suicide, an 18% rise from the 4,324 who died last year.

However, among farmers who cultivate their own land, with or without the help of other workers, the number of suicides dropped 3.7% from 5,129 to 4,940. Among tenant farmers who cultivate leased land, there was a 23% drop in suicides from 828 to 639.

The worst among States continues to be Maharashtra, with 4,006 suicides in the farm sector, including a 15% increase in farm worker suicides.

Read full @ <https://bit.ly/3FltUqx>

Source : www.thehindu.com

Farmers hit as Seed Act silent on compensation



Several instances of farmers suffering the loss of yield, allegedly due to the poor quality of seeds, have been reported in the district. But the affected farmers stand no chance of getting relief because the Seed Act of 1966 and Seed rules and Seed control order 1983 do not have a compensation clause. As a result, no appellate or nodal authority could be created to determine the right amount of compensation in cases arising out of seed quality.

A section of farmers in Mantripalayam, Kulampalayam, Kallipalayam and Koradamuthur bought shallot seeds from a trader in Kallipalayam. After the harvest in August (2021), they were in for a shock since the yield was the big onion (Bellary variety) and they could not sell it because of poor returns. Similarly,

another set of farmers from Kundadam, Pallampatti, Nandavanapalayam in Dharapuram Taluk faced similar issues in July 2021.

Speaking to TNIE, Prakash a farmer from Palladam, "Around 60-70 farmers bought onion seeds for a price ranging from Rs 6,000-7000 a kilo and spent more than Rs 50,000 to Rs 60,000 per acre on fertilizers, insecticides and labour. But the crops failed due to substandard seeds. Most of the farmers bought from middlemen and others from seed dealers. The affected farmers staged protests and after intervention from the agriculture department, they were able to trace the seeds from the distributor from Dindigul and got compensation of ` 25,000 per acre from him. But, this is very little. Neither the agri-

culture department nor seed inspection department arranged fair compensation."

Elaborating, Tamil Nadu Farmers' Protection Association President A Esan said, "Sub-standard seeds are causing huge losses for farmers for the past several months now. Private individuals have allegedly been selling onion seeds mixed with substandard onion seeds to the farmers. It is difficult to trace them. In order to regulate seed selling, the seed act 1966 and Seed control order 1983 are enforced. Though the Act has a criminal clause to check wrong or false selling, which offer a heavy fine and six months imprisonment,...

Read full @ <https://bit.ly/3Ho2lyF>

Source : newindianexpress.com



Rise of precision farming driving agriculture drone market growth

in addressing the agriculture industry's numerous emerging difficulties. The agriculture drone market is therefore expanding exponentially. According to Reports and Data, the agriculture drone industry size was USD 1.37 billion in 2020 and is expected to register a massive CAGR of 34.5% over 2021-2028.

Contributes To Increased Productivity

One advantage of drones in agriculture is their capacity to meet the expanding demands of the population. Drone technology has aided farmers in overcoming hurdles encountered while inspecting crops in the field. Satellite imaging is the most advanced method of crop monitoring available to date. Nonetheless, this technology has a number of disadvantages, prompting farmers to choose drones instead. Precision is lacking in satellite imagery, as photos are retrieved only once a day, which is insufficient for farmers. Drone technology, on the other hand, can provide a live feed or as many images as necessary, making them significantly more precise and efficient and aiding in precision farming.

Contributes To Pollution Reduction

Precision agriculture practises, which assist farmers in making more informed decisions, have advanced dramatically in recent years. While drones, also known as unmanned aerial vehicles (UAVs), have not yet penetrated the mainstream agriculture space, they are increasingly important in precision farming, assisting agriculture professionals in setting the standard for sustainable farming practises while also protecting and increasing profitability.

Pesticide application to fields can be inconsistent. Drones in agriculture can assist farmers in determining where to spray pesticides evenly, as too much can cause a variety of health problems. There is an option in which drones are equipped with the appropriate equipment that enables them to scan the

ground and evenly spray the chemical, hence reducing the amount of chemical needed by agricultural producers.

Cost Savings Associated With Analysis

Drones in agriculture enable farmers to scan large areas in a single trip and deliver significantly more information than satellite imaging. Satellite photography is too expensive, prompting farmers to turn to drones, which are substantially less expensive, faster, and more efficient. Drones are advantageous in agriculture because they enable farmers to monitor their farms precisely.

Precision agricultural practises rely heavily on the use of global positioning system (GPS) technology and geographic information system (GIS) tools, which enable fine-scale monitoring and mapping of yield and crop parameter data within fields.

These methods allow for more intensive and efficient cultivation, which can aid farmers in adjusting fertiliser prescriptions and identifying crop illnesses before they spread. Farmers can now make economic and environmental decisions based on more data – for example, by improving fertiliser treatment and applying the correct amount at the right time, significant cost and environmental savings can be realised.

Enhances Employment Prospects

Drone technology also creates several employment prospects for rural residents, ranging from computer engineering professions to drone operators who contribute to the professionalism of agricultural services. Agriculture is the principal source of income for a sizable portion of India's rural population, and increasing agricultural output increases employment options for them.

Read full article @ <https://bit.ly/3kFKt8Q>

Source : techbullion.com

The Agriculture Ministry of India has obtained permission from the aviation regulator DGCA to fly drones over rice and wheat fields in 100 districts in order to estimate crop yields at the gram panchayat level under the Pradhan Mantri Fasal Bima Yojana (PMFBY). This is the country's first large-scale pilot project using remote sensing technology for agricultural production estimation.

Apart from drone-based photos, the large scale pilot project will also utilise high spatial resolution satellite data, biophysical models, smart sampling, and artificial intelligence.

India is the world's agricultural superpower. Agriculture accounts for around 18% of India's total GDP (Gross Domestic Product). Lack of access to new agricultural technologies such as drones has proven to be a constraint on the sector's progress. The approval mentioned above could suggest that drones can now be utilised more extensively for agricultural purposes in India.

The Agricultural Benefits of Drones

For many years, drones have found a place in private industrial use; their commercial applications continue to expand as quickly as inventors come up with new ideas. Drones have proven to be an indispensable tool for farmers globally, particularly in the agriculture industry. Drone technology is advantageous for a variety of uses, including remote monitoring of tiny areas of crops and entire fields. Drones assist farmers

How climate change is impacting India's agricultural landscape

Aggressive adoption of sustainable farming solutions is vital to address the challenges of food security and ecological imbalance.

The recent findings of the Intergovernmental Panel on Climate Change (IPCC) are a clarion call for the entire humankind. The sober assessment of our planet's future compelled UN secretary-general, António Guterres, to describe the IPCC report as a "code red for humanity", which means we are reaching a point of no return; it's a do or die situation for us. The impact of climate change is evident on the Indian monsoon, which has become more erratic and violent over the last few years. The increasing variability in precipitation has resulted in prolonged dry spells followed by a heavy downpour.

A more chaotic monsoon will have a grave bearing on Indian agriculture and food production. The below-normal rainfall has sparked concerns over the output of summer-sown crops such as cotton, soybean, corn and rice. Being the largest exporter of rice and the top importer of edible oils, a drop in production could only put pressure on the country's burgeoning trade deficit.

The IPCC's warning is consistent with the findings of a study conducted by a group of German researchers who compared the Indian monsoon with more than 30 state-of-the-art climate models from all around the world. The report said, "For every degree Celsius of warming, monsoon rains will likely increase by about 5 per cent". There is no escaping this unless policymakers across the world make concerted efforts to reduce greenhouse emissions.

Cost of Inaction

Looking at the economic costs of the climate emergency, India was singled out in a 2020 report by Oxford Economics, a global forecasting firm, which predicted that the country's GDP could fall 90% by the end of the century if it doesn't improve on current policies.

Crop failures and increased infestation of pests and insects have become rampant. It will not be an exaggeration if we link these extreme climate events to farmers' suicides. The rising temperature, if left unchecked, would not only jeopardise food security but also make India dependent on food imports.

To understand the impact of climate change on Indian Agriculture and develop strategies for possible mitigation, the union agriculture ministry formed National Innovations on Climate Resilient Agriculture (NICRA) in 2011. The study, conducted to analyse the impact of rising temperatures on crops, livestock and fisheries, identified 151 climatically vulnerable districts across India. The findings suggested that rice and wheat in Indo-Gangetic plains, sorghum and potato in West Bengal and sorghum, potato and maize in the southern plateau could see reduced productivity.

Dynamics of Celsius

A 1-2 degrees Celsius rise could potentially decrease rice production by about 0.75 tonnes per hectare (t/ha) in inland zones and 0.06 t/ha in coastal regions. At the same time, a 0.5°C increase in winter temperatures is projected to reduce wheat yields by 0.45 t/ha. Similarly, research by National Dairy Research Institute, Karnal, also found that heat stress could adversely impact the fertility of cows and buffaloes.

Moreover, the whimsical climate pattern is reducing the number of fishing days as well as fishing stock. Ocean warming has wiped out much commonly eaten fish and forced several species to move



poleward or towards deeper waters to stay at the ideal temperature. Another concern is the decrease in the nutritional value of significant crops due to the rising CO₂ levels. The lower concentrations of important dietary micronutrients like zinc and iron in major food crops could be attributed to a sharp increase in carbon emissions.

Rising CO₂ could also reduce access to adequate levels of important vitamins in rice. The IPCC report also warned that the protein content of rice, wheat, barley and potatoes could fall by 6 to 14%, putting close to 15 crore more people at risk of protein deficiency. With reduced yield, food prices could rise as much as a third by 2050, bringing an additional 18 crore people in low-income households.

Can't hit snooze anymore

The writing is on the wall, and we are on the verge of facing the harshest consequences of a warming planet. And our only way out is to limit the impact of climate shock through evidence-based policy actions. Aggressive adoption of sustainable farming solutions is vital to address the challenges of food security and ecological imbalance.

Read full @ <https://bit.ly/3FAP58n>

Source : [businesstoday.in](https://www.businesstoday.in)

Misconceptions about Agriculture

Corporate encroachment on peasant agriculture does not just mean corporates taking away a part of peasants' income

There are a number of misconceptions about Indian agriculture which, if not removed forthwith, can have potentially adverse effects on the ongoing kisan agitation against the three farm laws. The first of these is the belief that corporate encroachment on peasant agriculture is a matter concerning only the corporate encroachers and the peasants.

This is wrong: corporate encroachment on peasant agriculture is a matter that affects the economy as a whole; it concerns everybody. This is not a rhetorical statement; it is literally true. In this sense the kisan agitation against corporate encroachment is not a bilateral issue like industrial action in a particular factory; in the process of fighting against corporate encroachment the kisans are fighting objectively for society as a whole, against subjecting India to "food imperialism". The reason is the following.

Corporate encroachment on peasant agriculture does not just mean corporates taking away a part of peasants' income, either directly via simply squeezing the peasants' share, or indirectly via passing on price falls to peasants but not price rises; it necessarily entails a change in land-use, from producing foodgrains of which the advanced capitalist countries have a surplus that they wish to sell to the third world, to producing such crops as they need, either tropical non-food crops which they cannot grow, or crops that they can grow, but only seasonally.

Corporate encroachment on peasant agriculture therefore necessarily entails a reduction in foodgrains output and a diversion of acreage from foodgrains to other crops needed by the metropolis. In fact, to push the economy further in this direction, an additional weapon is being used: the regime of minimum support prices, which applies mainly to foodgrains in India at present, is being

jettisoned. The government may protest a thousand times that MSPs will continue, but, significantly, it has never promised to amend the farm laws to give this assurance a legal form. Its intention is clear: to do away with the MSP regime altogether, which would greatly increase the kisans' risks from foodgrain cultivation and lower the profitability of such cultivation net of risk. This would necessarily reduce foodgrain cultivation, since the farmers, being too poor to bear risks, are highly risk-averse. Thus, from both sides, from the side of



the corporates which would thrust non-foodgrain production on them, and from the side of the government which would withdraw from providing MSP on foodgrain production, the farmers will be under pressure to abandon foodgrain production.

But then it may be asked: what is wrong if countries like India withdraw from producing foodgrains and resort to food imports instead for which they pay by exporting other crops? First of all, for the ability to import foodgrains there must be sufficient foreign exchange, which may not be always available with a country. Apart from the problem of non-synchronous movements in foodgrain and other crop prices, so that a relative fall in the latter may leave too little foreign exchange for the former, we must also remember that when a country of India's size approaches the world market for foodgrains, world foodgrain prices shoot up immediately, requiring even more foreign exchange for importing a given amount of grains.

Secondly, however, even if the requisite foreign exchange is available with the country for importing foodgrains, the people must also have the purchasing power for buying foodgrains; and purchasing power typically shrinks when a country moves away from producing foodgrains. Many of the substitute crops that would be grown in lieu of foodgrains are in fact much less employment-intensive than foodgrains, so that growing them means a reduction in agricultural employment, and hence in purchasing power with the people. They cannot afford to buy the imported grains as a result.

In addition to these factors there is also imperialist arm-twisting. Since metropolitan countries are the ones from which foodgrains would be getting purchased, in the event of India not toeing their line on any issue, they would simply refuse to sell foodgrains to India. Hence, becoming dependent on imports of foodgrains from metropolitan economies involves a serious loss of sovereignty. It is the realisation of this simple truth that had prompted the Indira Gandhi government to go in for the Green Revolution as a means of achieving food self-sufficiency. To put the clock back and destroy that self-sufficiency (even though it is self-sufficiency at a low level of purchasing power of the people) is what the government's farm laws are forcing on the country. Imperialism has been wanting this for a very long time, and the this government is spineless enough to give in.

The kisan agitation is a stand against this giving in. To accede to the introduction of corporate agriculture and to bargain only on how much should be the share of the farmers and how much of the corporates, is to miss this point altogether. It amounts to selling whatever remains of the country's sovereignty to imperialism.

Read full @ <https://bit.ly/3oIzTr>
Source : www.greaterkashmir.com

Online Meetings



www.agricultureinformation.com

Upcoming events

DECEMBER 1, 2021

3:00 pm

Dr. A. Ramalingam on "Opportunities in seed production"
To know <https://bit.ly/3CtxInJ>

05.00 PM

Dr. P. Naveen Kumar on "Commercial cultivation of bulbous flower crops – tuberose and gladiolus"
To know more view <https://bit.ly/3HEGAKZ>

DECEMBER 2, 2021

3.00 PM

Mr. Gorityala Vidyasagar on "Impact of climate change in Agriculture"
To know more view <https://bit.ly/3yt9Cba>

05.00 PM

Mr. T. S. Chelliah on "Vanilla tissue culture plants- cultivation, marketing & economics"
To know more view <https://bit.ly/3nzWzIO>

DECEMBER 3, 2021

3:00 pm

Mr. S. Vijay Kumar on "Micro irrigation – why it is absolutely necessary"
To know more view <https://bit.ly/3nyicD3>

DECEMBER 6, 2021

3:00 pm

Dr. C. Vaithilingam on "Role played by bio-solubilizers in reducing chemical fertilizers usage"
To know more view <https://bit.ly/3nBw5QS>

DECEMBER 10, 2021

05.00 PM

Mr. Abhishek Dasani on "Automation in farming – How these systems can help farmers in saving costs and producing better yields" -- During this meeting, Mr. Abhishek Dasani will discuss on how IoT technologies can help farmers save on labour costs and effectively manage indoor environment conditions to improve on yields and do better produce management. Development of cost effective automation solutions that can today allow farmers to record etc..

DECEMBER 21, 2021

3:00 pm

Dr. K. T. Chandrashekar on "Sandalwood cultivation – From nursery till marketing problems and opportunities"

DECEMBER 24, 2021

3:00 pm

Dr. Vinod Singh on "Sericulture: An opportunity for small and marginal farmers" -- Dr. Vinod Singh is a Scientist at Central Silk Board in Jammu. He says sericulture is very good occupation for small and marginal farmers specially from hilly areas. It is total one month crop with low cost and high benefit and highly subsidized by government. Cost of 1kg cocoon is about Rs.1,000/-. Any small farmers can produce 20 to 30kg cocoon in one month.

DECEMBER 28, 2021

3:00 pm

Dr. V K Jayaraghavendra Rao on "Unconventional strategies in agriculture for increasing farmers income" -- Dr. V K Jayaraghavendra Rao says income of farmers and productivity often cannot be related. With 330 million tones of horticultural production and 300+ million tones of agricultural production, farmers fail to get a fair price and the income is abysmally low. During this meeting, Dr. V K Jayaraghavendra Rao proposes to address this issue.

DECEMBER 30, 2021

3:00 pm

Mr. Akash Baburao Mule on "Shrimp farming practices and features of aqua-connect application" -- Mr. Akash Baburao Mule is a Senior Aquaculture Officer at Aquaconnect in Navsari, Gujarat. He says shrimp farming is concentrated mostly in coastal states from Gujarat to West Bengal. Majority of critical inputs like seed, feed etc are produced in AP & TN and transported to all the shrimp farming States.

DECEMBER 31, 2021

3.00 PM

Dr. Ashutosh Gautam on "Quality assurance and certification in organic farming" -- Dr. Ashutosh Gautam is a Scientist at Spices Board, Ministry of Commerce and Industry, Govt of India in Srinagar (Jammu and Kashmir). His interest is on general view of organic farming, cultivation practices, prerequisite for organic certification and process of same.

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Dr. R. Venkattakumar on "Innovative marketing of fruits and vegetables during COVID 19 lockdown period"

Dr. R. Venkattakumar Principal Scientist and Head, Division of Social Sciences and Training, ICAR-Indain Institute of Horticulture in Bengaluru, Karnataka. Says during the lock down period phase 1 of COVID 19 pandemic, there was a difficulty in marketing of fruits and vegetables by the farmers due to lack of transport facilities and mobility restrictions.

Mr. Abhishek Dasani on "Automation in farming – How these systems can help farmers in saving costs and producing better yields"

Mr. Abhishek Dasani will discuss on how IoT technologies can help farmers save on labour costs and effectively manage indoor environment conditions to improve on yields and do better produce management. Development of cost effective automation solutions that can today allow farmers to record and manage various input parameters (temperature, moisture, pH easily right from their phones.

Dr. K. T. Chandrashekar on "Sandalwood cultivation - From nursery till marketing problems and opportunities"

Dr. K. T. Chandrashekar is an Executive Director of Sandalwood Society of India in Bengaluru, Karnataka. Indian sandalwood is highly priced due to its fragrant wood and oil. It is used as a fixative in world class perfumes, aromatherapy, various pharmaceutical preparations and cosmetics.

Mr. Kalle Sreenivasulu on "Date tissue culture plants"

Mr. Kalle Sreenivasulu is the Managing Director of Vikas Biosciences Pvt. Ltd. in Hyderabad, Telangana. His interest is Date Palm (Khajoor) Cultivation. To know more <https://bit.ly/39JPFDD>

Dr. P Manivel on "Everything about ashwagandha"

Dr. P Manivel, Principal Scientist and Head, ICAR-CTRI Research Station, Vedsandur, Dindigul District, Tamil Nadu.

Dr. Vani on "Processing and value addition of moringa"

Dr. V. Vani is the Assistant Professor at Horticultural College and Research Institute in Periyakulam, TN. Her interests are Food processing and preservation; Nutrition; Post harvest technology of fruit & vegetables and Quality control of processed products.

Mr. Kiran Bhaskaran on "Sustainable agricultural practices for saving money in agriculture"

Mr. Kiran Bhaskaran is the Founder and Chief Consultant at Indian Farm School in Ramanagara, Karnataka. <https://bit.ly/2T8RKDP>

Mr. Mallinath Hemadi on "Small Scale Industry that would double farmer's income"

Mr. Mallinath Hemadi is a Consultant at Numratha Agro Farm Foods Pvt. Ltd., in Kalaburgi in Karnataka. He is an agricultural graduate, organic farmer by passion and has experimented the uses of Desi cow's – urine, dung, buttermilk etc., on crop growth development.

Mr. Satish Babu Gadde on "Cattle based agriculture - India's century old traditional agriculture"

Mr. Satish Babu Gadde is the Secretary of Lakshya in Eluru, West Godavari District, Andhra Pradesh. To know more <https://bit.ly/3ep0xqL>

Mr. Vasim Shaikh on "Role played by APEDA and other export councils to promote agri exports from India"

Mr. Vasim Shaikh is an Export Manager at AVS International in Ahmednagar in Maharashtra. To know more view <https://bit.ly/3BPS1LV>

Mr. Tanmoy Mondal on "Pre-harvest fruit bagging - Useful approach for quality fruit production"

Mr. Tanmoy Mondal says fruit bagging is a useful technique to improve the yield, appearance, quality of the fruit and prevent disease and pest infestation. It increase awareness towards reducing the use of pesticide to ensure consumer health, work safety and environmental protection.

Dr. Priya on "Improved agronomic practices in wheat"

wheat is an important rabi crop grown in many parts of India. The improved agronomic practices such use of high yielding varieties, soil test based nutrient management, irrigation management and Integrated weed management helps to get higher yield in wheat.

Dr. Anandkumar Naorem on "Why farmers should test their soil?"

Dr. Anandkumar Naorem will highlight how we can collect soil samples before sending to soil laboratory. He will also discuss what does soil test report mean and its interpretations.

Mr. Sudhakar on "My experience with installing drip irrigation on many farms in Tamil Nadu"

Mr. Sudhakar says drip irrigation system is the method of irrigating plant by PVC pipe and lateral without any manual work. The purpose of drip irrigation is to irrigate plants in a proper manner with minimum usage of water.

Mr. Altaf Aijaz Andrabi on "How to market agri products"

Mr. Altaf Aijaz Andrabi is the Former Director at Department of Agriculture Kashmir in Srinagar, Jammu & Kashmir. He is presently working as Advisor at Laxman Roa Inamdar National Academy with NCDC ministry of Agriculture and Farmers Welfare Govt of India.

Mr. Ashok Hasanda Manwani and Ms. Kulanjan Manwani on "Integrated pearl farming"

Mr. Ashok Hasanda Manwani and Ms. Kulanjan Manwani, Directors of Indian Pearl Culture, Ulhasnagar, Thane Maharashtra are engaged in doing pearl farming since 15 years. They are the only farmers who have done design Pearl Culture (farming) in states like Thane (Maharashtra), Bharuch (Gujarat), Bangalore (Karnataka), Begusarai (Bihar), Chitrakoot (Madhya Pradesh), Allahabad (Uttar Pradesh), & Raipur (Chhattishgarh). To know more view <https://bit.ly/2YeAb43>

Dr. S.J. Ankegowda on "Nutmeg cultivation"

Dr. S.J. Ankegowda is the Principal Scientist and Head at ICAR-Indian Institute of Spice Research in Madikeri, Karnataka. His interest is production physiology of Spices; Black pepper, Cardamom. To know more view <https://bit.ly/3r1lRwL>

Mr. Rajender Kumar on "Potential greenhouse crops for Indian market"

Mr. Rajender Kumar, Business Development Manager-South & East Asia, Cravo Equipment Ltd., Canada. The retractable roof production system or RRPS has been developed by Cravo over the last 35 years, to help growers create superior results using a system that combines the benefits of climate optimization, nature and protection. To know more view <https://bit.ly/3kleyml>

Mr. Vimal Panjwani on "Rural household savings improves using renewable energy"

Mr. Vimal Panjwani is the Founder & CEO of AgriVijay in Pune, Maharashtra. To know more view <https://bit.ly/3i5obwL>

Mr. Kulkarni HB on "Organic Certification - Cultivation problems & solutions"

Mr. Kulkarni HB is the President of Federation for Re-farming Societies in Bengaluru, Karnataka. To know more view <https://bit.ly/3ByAKrA>

Ms. Ruchi Bishnoi on "Introduction to PPV & FR Act, 2001 and Farmer's Right"

Ms. Ruchi Bishnoi says that Government of India enacted "The Protection of Plant Varieties and Farmers' Rights (PPV & FR) Act, 2001" adopting Sui Generis System. The legislation recognizes the contributions of both commercial plant breeders and farmers in plant breeding activity and also provides to implement.

Dr. Sakamuri Sreenivasulu on "Mandates and achievements of KVK, with special emphasis to paddy & groundnut"

Dr. Sakamuri Sreenivasulu is the Sr.Scientist & Head at Rashtriya Seva Samithi (RASS) – Krishi Vigyan Kendra (KVK) in Tirupati, Chittoor District. His interest is on mandates and achievements of KVK, improved varieties, field preparation, seed treatment, sowing / different crop establishment methods, nutrient management, weed management, pest and disease management in paddy and groundnut crops.

Dr. Chirasree Gangopadhyay on "The integrated rice insect pest management for the farmers across India"

Dr. Chirasree Gangopadhyay from New Barrakpur in Kolkata is Grade A, Gazetted officer, WBAS, Government of West Bengal. She says West Bengal is the rice bowl of India, having highest production of rice. Dr. Chirasree Gangopadhyay has chosen this topic for discussion to give a thorough idea about the major pest management practices of the rice insect pest to the participants across India.

Dr. Shruthi Belliappa on "Climate-resilient pigeonpea cultivation"

Dr. Shruthi Belliappa says India's population is projected to be 1.64 billion by 2050 and the food production of 492 million tonnes. The current 25 million tonnes of pulses need to be escalated to 50 million tonnes by 2050 with a growth rate of 4.25 every passing year. In this context, the role of pigeonpea breeding is highlighted for achieving the vision 2050.

Mr. Goutam Roy on "Sustainable aquaculture and fisheries management"

Mr. Goutam Roy says fish is crucial to a nutritious diet in many parts of the world. It is recognized not only as some of the healthiest foods on the planet but also as some of the least impactful on the natural environment. For these reasons, they are vital for national and regional nutrition strategies and have a big part to play in eliminating hunger and malnutrition.

Mr. Tejram Nagar on "Soilless cucumber cultivation - economics and marketing"

Mr. Tejram Nagar is an Agronomist at My Crop in Ujjain, Madhya Pradesh. During this meeting, he will discuss – How to grow cucumber under protective structures. – Cucumber growing in soilless systems substrate hydrophobic aeroponic.– What is Benefits of soilless growing media.

Mr. Mukesh Ramagoni on "Creating a value through Agripreneurship in rural India"

Mr. Mukesh Ramagoni says, Agripreneurship or Entrepreneurship in agriculture is now vividly explored subject and is been the talk of town in entrepreneurial ecosystem. But is this really creating a value at gross root level or is it becoming successful in the last mile delivery of innovation and technology which can up bring and impact the rural community ?

Dr. Chandra Kiran Sant on "Process optimization in dairy farming"

Dr. Chandra Kiran Sant is the Dairy Advisor at Livestock Management Centre in Mumbai, Maharashtra. He is also associated with
1) Gomati Cooperative Milk Producers Union, Tripura as Expert Dairy Development for improving the milk quality & quantity as well as oversee installation of 40000 LPD Dairy Processing Plant.
2) Trainer (for Dairy Farming) in Indian Dairy Association – West Zone: covering Maharashtra, Gujarat, Goa, Madhya Pradesh, Daman and D. Nagar Haveli since 2010.
3) Technical Advisor (Dairy) in Paragaon Enterprise Industries in Vadodara,(Gujarat) since 1992 ; a Company engaged in manufacture of cattle feed plants & equipments ministry of Agriculture and Farmers Welfare Govt of India.

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NEW FARM BILLS 2020



The Farm bills 2020 enacted, by the Lok Sabha on 17th September 2020 and by the Rajya Sabha on 20th September 2020. As per Third Advance Estimates for 2019-20, total Food grain production in the country is estimated at record 295.67 million tonnes which is higher by 10.46 million tonnes than the production of food grain of 285.21 million tonnes achieved during 2018-19. Total horticulture production in 2019-20 is expected to be 313.35 million tonnes (MT), about 0.84 per cent higher than 2018-19, according to first advance estimates. All these were possible with the advancement of technologies and commercialising the technologies through premier institutes of ICAR like the IIHR- Bengaluru which has commercialised around 300 technologies and created a battalion of Hortipreneurs in India, thereby signalling the transformation of a farmer from a mere producer to that of an entrepreneur with business skills embedded in the start-up and stand up culture of the ATMANIRBHAR Bharat envisaged in the new farm bills of 2020

During the Green revolution IADP(Intensive Agricultural District Programme) and IAAP(Intensive Agricultural Area Programme) the subsidy and procurement was introduced to attain self-sufficiency in food production. From a begging bowl India emerged self-reliant, self-sustainable. The slogans JAI JAWAN and JAI Kisan was promulgated. The main intention was a sustainable India which could protect its borders and produce food for its population. The Globalisation and liberalisation around 30 years back changed the direction of the country from Agricultural production systems to Market led Production system. This was made possible through ICAR and its innovative projects NARP(National Agricultural Research project)-NATP(National Agricultural Technology Project)-NAIP(National Agricultural Innovation Project) which transformed farm-

ing as an enterprise. These innovations are aimed at farmers earn meaningful incomes, and move from sustenance to sustainability to commercial and viable ventures. In this direction the new farm bills 2020 gives ample scope and opportunities to realise opportunity. Complacency and protection on a continual basis, slows down the transformation, and if doubling farmers income has to happen, The new farm bills 2020 has to be adopted in letter and spirit. This liberates the farmers from the money lenders, and mono cropping.

The New farm Bills 2020 gives ample scope and plethora of opportunities for the farmers to produce and sell. The markets are bound to become volatile, therefore market intervention to reduce volatility in the market to protect farmers is envisaged in the new farm bills in the form of insurance, arbitration, MOU, contract farming, contracts, A smoother transition into a demand-supply market, through controlled volatility like supplier and buyer contracts, stronger value chains, cold chains, and processing and hedging to reduce volatility is contemplated in the new farm bills but purposefully less understood for political gains it could be argued.

So, instruments of financial hedging like insurance, forward and future contracts, facilitating remunerative prices through competitive alternative trading channels. This proposed legislation seeks to give farmers the right to enter into a contract with agribusiness firms, processors, wholesalers, exporters, or large retailers for the sale of future farming produce at a pre-agreed price. Is contemplated on a real time situation in aspirational and pilot districts before

it can be upscaled in real-time situations.

After 30 years post liberalisation, the protection for farmers has to be phased on to empower, reskill, and upskill the farmers to be self-sufficient and produce market demanded crops and products and increase their incomes through diversification, rather than subsidy and MSP based protection. In order to metamorphosise into the protection oriented production system the change is contemplated to Market driven production system through the introduction of the new Farm bills 2020, wherein the farmers get opportunities to empower themselves and become global, competitive, remunerative, self-sufficient instead of monocropping of rice and wheat, and recurring dependant on government for subsidies and protection through MSPs.

The country has enough buffer stocks which keys in the food security along with nutritional security coming from around 313.35 million tonnes (MT), of horticultural production on all fronts., Therefore imposition of stock holding limits on such items except under 'extraordinary circumstances' like war, famine, extraordinary price rise and natural calamity, is in the back end for emergency, The apprehension of high price volatility for new products is the fear which is triggered artificially and misconstrued among opportunists who are discouraging gullible and innocent farmers to take advantage of the new Farm bill 2020.

Change is imminent, change is difficult, there is resistance for change, and finally and obviously one embraces change don't resist change because you require 3 times the energy, first you resist, 2nd you have to overcome the resistance, 3rd energy is you have to change and that is versatility, which is needed for a vibrant production system.

A production system may be efficient by producing more crop per drop with latest technologies, but it needs to be effective in catering to the needs and aspirations of the buyers' market, until



Panacea for assured income and market driven Agriculture - Volatility approach

and unless we do it, incomes cannot be increased at farmers side, production aggregation, value addition, and diversification holds the key for increasing farmers' income. Post liberalisation today's consumer is demanding and accessing farm products across the globe, and our farmers have the opportunity to produce those, like avocado, dragon fruit etc., and the new farm bills 2020, gives opportunities for that, to be competitive, remunerative and global.

Due to the vicious circle of debt traps, the present marketing system is predatory in nature at times, because rice after rice and wheat after wheat, a glut type of situation, wholly dependent on input subsidy and MSP based procurements as triggers, made our farmers complacent, protected and resistant to change, with huge dependency on governments.

While the change from the comfort zones to a higher volatile zones can trigger demands in the market, at the same time the apprehension that a farmer can lose in the high volatile markets cannot be discounted, in order to transform, it has to be gradual from an incompetent, glut oriented rice and wheat production system to the more competitive remunerative production system. In the same direction RKVY-RAFTAAR puts remunerative and market oriented Agriculture enterprises as drivers of change to become market led, and not subsidy or MSP led.

When crops like rice and wheat are surplus, it is uneconomical for the governments to give farmers the right to enter into a contract with agribusiness firms, processors, wholesalers, exporters, or large retailers for the sale of future farming produce at a pre-agreed price. Is

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When crops like rice and wheat are surplus, it is uneconomical for the governments to farmers but enhances the GDP of the country. Therefore the new farm bills are in the right direction, Lack of awareness among farmers, and opportunistic tendencies and misunderstandings has led to chaos and confusion which is being clarified by this article. Therefore, imposition of stock holding limits comes only under 'extraordinary circumstances' like war, famine, extraordinary price rise and natural calamity, this imposition is only a safe guard and not a rule. There is enough scope of market liberalisation and restriction and now farmers have scope to experiment and grow.

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