



Seed Connect

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In past several years the sowing season of cotton in India has brought the issue of rampant usage of illegal cotton seeds. The Federation of Seed Industry of India has been continuously alerting the government officials on the impact that this trend can bring to the farmers, seed industry and the country. The success of Bt Cotton raised hope for farmers in India to adopt HtBt cotton which is the next technology. Since regulatory approvals for HtBt cotton are pending, farmers in India have not been able to legally adopt it. As a result some mischievous elements are selling this unapproved HTBT cotton across India. In 2020, 30 lakh packets of illegal HtBt cotton were sold and in 2021, 75 lakh packets and this year it is expected to reach 90 lakh packets covering 20 per cent of the 120 lakh hectares of cotton area in India.

Other than Maharashtra, Gujarat, Telangana and Andhra Pradesh are the major states where illegal HtBt seeds are grown. Due to the presence of herbicide trait and the trait to control pink bollworm as claimed by the illegal operators on their packs, this illegal HTBT cotton marketed under several brand names is sold for almost 1500 rupees per packet which is much higher than the price fixed by the government. Last year the farmers have paid more than Rs 500 crores extra money to the illegal operators.

Farmers are at risk with these illegal cotton seed sale as he is paying high price and there is no accountability of the quality of seed, either physical quality or trait quality of the seed. Furthermore, there is no redressal mechanism on quality complaints to the agriculture department because the operators from whom the farmers purchased the seeds are not known. Since the illegal seeds are using unknown and unapproved traits in them it can contaminate regular seed production thereby putting legitimate seed growers to heavy losses.

The government is losing revenue in terms of tax collection and it is threatening the entire legal cotton seed market in the country. It is very difficult to control once it is supplied to the market. It must be contained in the production fields, ginning factories and warehouses before the supplies to the market. FSII demanded portable kits be made available with agricultural field officers to test cotton seed production areas and destroy crops where HtBt is found. We hope the government will take cognisance of the matter and take strict actions to contain the sale of the illegal cotton seeds.

In this newsletter we have also covered news around several important developments on agriculture across India, globally and in the area of research. We hope you find it a good read!



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News from India and Around the World

[Climate change, big agriculture combine to threaten insects](#)

(India Today)

Climate change and habitat loss from big agriculture are combining to swat down global insect populations, with each problem making the other worse, a new study finds. While insects may bug people at times, they also are key in pollinating plants to feed people, making soil more fertile and they include beautiful butterflies and fireflies. Scientists have noticed a dramatic drop both in total bug numbers and diversity of insect species, calling it a slow-motion death by 1,000 cuts. Those cuts include pesticides and light pollution.

[FSII urges Government to restrict sale of HtBt cottonseed](#)

(Krishi Jagran)

The Federation of Seed Industry of India (FSII) has urged the Union and State governments to crack down on illegal seed producers who are selling unapproved HTBt (herbicide tolerant Bt cottonseeds) in various states. The association claimed that the sale of illegal seeds has reached epidemic proportions, claiming that farmers must have spent Rs 500 crore last year on the packets, which cost a whopping Rs 1,500 each.

[Govt announces foodgrain output target of 328 MT for 2022-23](#)

(The Indian Express)

The government announced a foodgrain production target of 328 million tonnes for 2022-23. The target was announced at the National Conference on Agriculture: Kharif Campaign 2022, which was inaugurated by Union Agriculture Minister Narendra Singh Tomar. The meet was attended by the senior officials from the Union Ministry of Agriculture and Farmers Welfare and officials from the states' agriculture departments. Of the 328 million foodgrain production target fixed for 2022-23, kharif foodgrain production target has been fixed at 163.15 million tonnes, while rabi foodgrain production target has been kept at 164.85 million tonnes.

[How India achieved \\$50 billion export target in agriculture sector](#)

(Business Standard)

The achievement of reaching the highest-ever mark of USD 50 billion worth of agriculture exports was attained through multiple steps taken by the Department of Commerce to turn India into the food basket for the world, said Commerce Ministry officials. The Commerce Ministry officials said that the previous highest mark was in 2013-14 at USD 43 billion after which the exports saw a free fall of sorts

and suffered a USD 10 billion decrease in the figure by 2016-17 after which Department of Commerce identified four main reasons for the decrease in Agri-exports.

[Egypt announces India as new wheat supplier](#)

(Egypt Today)

To minimize the effects of the ongoing Russian-Ukraine crisis on Egypt's grain stockpile, the Egyptian government has announced India as a new wheat supplier. Egyptian Minister of Agriculture El Sayyed El Qusseir announced in a statement that India has been recognized as a new country of origin for importing wheat within the framework of the state's plan to open new sources of importing wheat as a strategic commodity. Before the ratification, the Egyptian Ministry has sent a delegation headed by the chairperson of the Pest Risk Analysis Section at the Ministry Islam Farahat to India to study the feasibility of importing the Indian wheat to soften the effects resulting from the Russian-Ukrainian crisis, climate change crises and drought that may threaten food security.

[How agricultural evolution is giving rise to a new futuristic model of farming](#)

(The Times of India)

The emergence of AgriTech in India has empowered many farmers to embrace new farming methods that boost productivity and reduce environmental impact. Technological intervention and digital transformation have given rise to precision farming which harnesses data, artificial intelligence, automation, sensors and drones to optimize farm production and returns. Farmers are now collaborating with startups to deploy sensors and wireless devices on their fields that help them continually monitor soil health, crop growth and detect pests and diseases, thereby enabling them to take action as and when needed.

[Agriculture Minister Narendra Singh Tomar launches two new portals for agri sector](#)

(The Financial Express)

Agriculture Minister Narendra Singh Tomar launched two new portals, including one for registration of pesticides. Another portal is for documentation related to imports and exports of agri-products and plants. The minister launched the two portals — CROP (Comprehensive Registration of Pesticides) and PQMS (Plant Quarantine Management System) — in an event held at the Pusa complex, with an aim to improve ease of doing business. Addressing the event, Tomar said the two new portals have been launched to make the process of pesticides registration and documentation process for export-import simple and transparent.

[A spot-on Met to spell good news for the economy](#)

(Mint)

The weather office's prediction of a normal monsoon for the fourth year in a row has cheered the agricultural sector and the broader economy, not least because of the growing accuracy of its forecasts. In its first long-range forecast for 2022, the India Meteorological Department (IMD) said it expects rainfall to be 99% of the long-period average (LPA) during the June-September monsoon. Statistical forecasts rarely achieve a 100% strike rate, but the error rates in India's official monsoon predictions have come down over the past two decades, IMD data shows.

['India could meet Sri Lanka fate if freebie culture persists'](#)

(The Hindu)

India could end up facing a Sri Lanka-type economic crisis if it doesn't shun the "culture of freebies" and subsidies in sectors like agriculture, NITI Aayog member Ramesh Chand warned, stressing that the "mind-boggling" support measures for farmers has made agriculture extremely dependent on such crutches. "Our policies and support to agriculture and many other sectors are going in a direction that if we do not put a check on it, I think a day is not far when our fate will be same as that of the Sri Lankan economy," Mr. Chand said, blaming "self-anointed experts" for skewing the debate on farm subsidies and minimum support price (MSP) for crops.

[Agriculture absorbed additional 11 million workers over last 3 years: CMIE](#)

(The Economic Times)

Driven by good performance compared to other sectors during the pandemic, agriculture has absorbed an additional 11 million workers over the last three years while the rest of the economy lost 15 million jobs, the Centre for Monitoring Indian Economy said. According to CMIE's Consumer Pyramids Household Survey, agriculture saw an estimated 4.5 million increase in employment during fiscal 2021-22

[External Affairs Minister S Jaishankar holds talks with Argentine counterpart](#)

(CNBC TV18)

Patel said exports of some other major agricultural products like wheat, sugar, and cotton have registered a substantial increase during the current year. "During the period from April 2021 to January 2022 of the current financial year, exports of agricultural products have amounted to USD 40.87 billion compared to USD 32.66 billion over the corresponding period of previous year, registering an increase of 25.14," she said during question hour. The minister said the rise in agricultural exports improves realisations for farmers and has a positive impact on their income. In order to ensure that the farmers benefit from exports, the government has launched a Farmer Connect Portal for providing a platform for Farmer Producer Organisations Companies (FPOs/FPCs) and cooperatives to directly interact with exporters, she said.

[Circular economy a \\$45 billion opportunity by 2030 in India: report](#)

(Mint)

India's circular economy could touch \$45 billion by 2030, an opportunity start-up can potentially tap into, according to a report by venture capital fund Kalaari Capital. Adopting circular economy practices can help generate savings of over \$624 billion by 2050 across sectors such as food, agriculture, construction, and mobility in India, the report said. Sectors such as fashion, construction, agriculture and food, mobility, and rare earth materials are expected to provide the biggest opportunities for circular economy start-ups.

[How to Revolutionize Farming in India](#)

(Council on Foreign Relations)

India can actually be a trend-setter in agricultural entrepreneurship. Today there is a global trend towards farm fresh products, traceability, and ethical sourcing. This is a big opportunity for a country like India to become more relevant for the United States and to the world in its food offerings. Earlier, in the West, the demands of the food industry led to industrialized farming with large farm holdings and mechanization. Food processing models in the developed world meant large factories were churning out highly processed, standardized products en masse. Consumers don't want that food anymore—they want fresh tasting food, they want food that's better for their health, and they want food closer to the source from which it was grown.

['Normal' monsoon this year expected to douse some inflationary flames](#)

(Business Standard)

A normal monsoon season this year is expected to mitigate some inflationary pressures, especially being witnessed in certain food commodities. Besides, healthy and well-spread rains will repose faith in the country's economy which faces ever increasing risk of 'Stagflation' due to high global commodities' costs. In March, the retail inflation rate climbed to nearly 7 per cent triggering fears of an imminent rate hike by the RBI in its next MPC meeting. The present inflationary pressure has made this year's monsoon season crucial for propelling growth not just for the agriculture sector but for the whole of India Inc.

[West Bengal aims to double exports of agriculture & allied products by 2030](#)

(Business Standard)

West Bengal is aiming to double exports of agricultural, horticultural and animal-based produce by 2030, and has introduced several enabling policies to fructify the objective, a top state government official said. The government has identified export clusters across the state to ensure focused processing and higher production, he said. There is a huge potential of doubling exports. We need to channelise opportunities and make it happen. The state has done exceedingly well in the agriculture and allied sector, including fisheries, horticulture, food processing and animal resource. A lot of

enabling policies have also been brought out by the government, Chief Secretary H K Dwivedi said at the Bengal Global Business Summit here.

[Govt aims to rein in edible oil imports with push to domestic sunflower production](#)

(The Financial Express)

In a bid to reduce dependence on edible oil imports, the government is considering measures to expand the area under sunflower cultivation, an agriculture ministry official said. Measures to revive sunflower production, which used to be grown on 2.66 million hectares (mh) in 1993-94, will include supply of quality seeds, productivity improvement through introduction of technology, and promotion of processing and value addition. According to the official, area under sunflower cultivation dropped to 1.94 mh during 2005-2010. "Currently it is grown on only 0.2 mh, mostly in Karnataka, Maharashtra, Andhra Pradesh," the official said. Earlier Punjab, Tamil Nadu and Uttar Pradesh also used to grow sunflower.

New Research

[Research: Insects are dying off because of climate, farming](#)

(E&E News)

The combined influence of climate change and expanding agriculture are causing insect populations to plummet in some parts of the world, according to a new study that determined the abundance of bugs has dropped by half in the hardest-hit places. That's a big concern for both people and nature. Insects often help form the bedrock of natural ecosystems — they pollinate plants, including agricultural crops, and also provide an important food source for other animals. "Our findings highlight the urgency of actions to preserve natural habitats, slow the expansion of high-intensity agriculture, and cut emissions to mitigate climate change," said lead study author Charlotte Outhwaite, a scientist at University College London, in a statement.

[Jharkhand Agri Research Institutes Release 16 High-Yielding Crop Varieties for Farmers](#)

(Krishi Jagran)

The Jharkhand State Variety Release Committee (SVRC) has released 16 improved varieties of nine crops developed by various agricultural research institutions for Jharkhand, four of which were developed by the scientists at Birsa Agricultural University (BAU) after years of experimentation using various breeding techniques and protocols. There are seven new rice varieties, two new chili varieties, and one each of tomato, litchi, bael, linseed, soybean, field pea, and brinjal. These high-yielding, early maturing varieties are resistant to major diseases and pests and are ideal for Jharkhand's drought-prone, dryland ecosystem.

[Understanding the climate effects of grazing agriculture](#)

(News Wise)

Steiner and her team recently set out to understand the impacts of greenhouse emissions from grasslands. Only with this knowledge can scientists hope to steer agriculture toward climate-friendly solutions. This study was published in *Agrosystems, Geosciences & Environment Journal*, a publication of the American Society of Agronomy, and Crop Science Society of America. As detailed in the research, Steiner's team studied four pastures in Oklahoma. Three of the pastures were native prairies. One was a planted pasture made up of a single species of Old-World bluestem grass. Unlike the planted pasture, the native prairies host many species and receive less fertilizer. The scientists were especially interested in three major greenhouse gas sources. Carbon dioxide is perhaps the most well-known. However, methane and nitrous oxide are even more powerful at trapping heat, so it is key to understand how much of these gases are emitted too.

[Study Gives Clues on How to Reduce Food Loss & Waste in Perishable Supply Chains](#)

(Krishi Jagran)

TCI Postdoctoral Associate Jocelyn Boiteau and Director Prabhu Pingali show in a study published in *The American Journal of Clinical Nutrition* that most food loss in South India's tomato supply chain occurs on the farm and demonstrate a link between quality loss and the number of tomatoes eventually lost. According to Boiteau and Pingali, while loss occurs throughout the supply chain, the

majority of it occurs after tomatoes are harvested but before they leave the farm. Lower levels of loss were found to be associated with peak season harvesting, indicating the potential importance of seasonal supply and demand factors.

[ICAR Introduces 2 Special Programmes For Upscaling Biofortified Varieties of Crops Through KVKs](#)

(Krishi Jagran)

The Indian Council of Agricultural Research (ICAR) has created two programmes: Nutri-sensitive Agricultural Resources and Innovations (NARI) and Value Addition and Technology Incubation Centres in Agriculture (VATICA). Under the All India Coordinated Research Project on Women in Agriculture, the ICAR is also executing programmes like "Sustainable Approaches for Nutritional Security" and "Nutritional Security and Health Promotion of Farm Families," according to the minister.

[Rice farming innovations create circular economy](#)

(SciDev Net)

Researchers say they are making rice farming in East Africa more sustainable by promoting the adoption of innovations such as recycled crop by-products, improving food security in the region. The Reduce, Reuse, Recycle Rice initiative for Climate-Smart Agriculture (R4iCSA), involving 5,000 smallholder farmers in Uganda and Kenya, also aims to encourage the use of sustainable management practices such as integrating rice and legume cultivation to improve soil health. "The research is generating evidence of developed and tested business models in using products and by-products of rice to drive scaling up the models," says project leader Anthony Mugambi Makona, an agricultural value chains development and market access specialist at Kenya-based Kilimo Trust, which is implementing the project.

[Newly Discovered Protein in Fungus Bypasses Plant Defenses](#)

(USDA)

A protein that allows the fungus that causes white mold stem rot in more than 600 plant species to overcome plant defenses has been identified by a team of U.S. Department of Agriculture Agricultural Research Service and Washington State University scientists. Knowledge of this protein, called SsPINE1, could help researchers develop new, more precise system of control measures for the *Sclerotinia sclerotiorum* fungus, which attacks potatoes, soybeans, sunflowers, peas, lentils, canola, and many other broad leaf crops. The damage can add up to billions of dollars in a year of bad outbreaks.
