



Federation of Seed Industry of India

Annual Report 2019-2020



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We are privileged to present the Federation of Seed industry of India annual report for the year 2019-20. The year included a lot of positive interactions with the regulators and policy makers on various aspects of agricultural business policy. Many improvements and changes were set into motion with the new Seed bill 2019, that was thoroughly discussed and debated. Other policies that were discussed and consulted upon include, policies on germplasm access, digital sequence information, gene editing regulation and GM import regulations. The federation got the opportunity to participate in various national and international events (APSA, APAARI, ISF) and put forward the Indian seed industry point of view.

We had meetings and shared our position and inputs with Union and State ministers of Agriculture, and the offices of Secretary Agriculture and Joint Secretary Seeds in Agricultural ministry. We also interacted with Chairperson of NBA, PPVFRA, FSSAI, GEAC and presented our case regarding various industry related issues.

The federation took up aggressive outreach via social media as well as print media. Farming and industry related issues were taken up in social media posts and both technology and industry point of view was conveyed in print media publications. Other than the monthly newsletter, through which we share the latest happenings with multiple stakeholders, we initiated other campaigns. One of them had farmers sharing views and issues, another had seed industry employees talking about their motivations and also a women's day video with our member employees talking about their journey. These got a positive response from our members and also on media platforms. We also initiated interviews of industry leaders and eminent academicians sharing their views on status of agriculture in India.

Multiple outreach events were organized in collaboration with other associations or Universities to create awareness and provide a platform for open discussion on issues like GMO acceptance, gene editing, Fall armyworm issue and germplasm access.

The federation worked proactively with the government at the centre as well as in States to manage the nation-wide lockdown, so that agricultural operations went on smoothly and farmers received the seeds for sowing in right time. There were multiple representations made to the authorities along with virtual meetings to smoothen out the process and any glitches faced by various member companies in different states and regions. These efforts were continued in various phases of the lockdown. A separate report is attached for the said period. Overall a challenging and yet positive year for the federation as we worked closely with our members to bring out various issues at the forefront and engage in multi-stakeholder interactions. We present to you the various glimpses of our initiatives through this report.

April 2019

AAI participated in the Pan-Asia Farmers Exchange Program in Manila, The Philippines. Our delegation included 2 progressive farmers and 2 media persons who were interested in the field of agriculture. The five-day tour included visits to farmer's fields, seed packaging plants and IRRI research fields. Multiple presentations on various aspects of the agricultural technology were made and these led to interactions and discussions amongst the participants from various countries of the region.



Two articles appeared post the Farmer Exchange tour.

Reaping riches from rice research

By: Vivian Fernandes | Updated: Oct 05, 2019 12:54 AM

From developing varieties that don't need flooding of fields to enriching the grain's nutrient content, IRRI is making rice a wonder crop

Advocacy and Outreach-

FSII wrote to Joint Secretary-Seeds and DGFT with a Request to Remove Hybrid Rice Seeds from Restricted Export Category (Chapter 10 of Schedule- 2 of ITC (HS) Classification of Export & Import Items). We also approached CM of Punjab regarding the sale of TL-Hybrid rice seeds in the state.

FSII also connected with PPVFRA regarding second year hybrid seed production for DUS testing and the notice on "Plant breeder rights".

FSII also wrote to Union Minister of Agriculture on seed import duty for Watermelon and musk melon seed import.

AAI wrote to DDG-Crop science to reconsider yield and Bt protein expression requirements for advancement of Bt cotton hybrids.

May 2019

Advocacy and Outreach-

FSII also approached Joint Secretary-Seeds regarding compulsory treatment of seeds for the control of Fall Army worm (FAW). FSII submitted comments on draft guidelines on Access to Biological Resources and Associated Knowledge and Equitable sharing to NBA and Ministry of Environment. FSII put in the request for inclusion of vegetables Seeds in the Appendix 3B of MEIS export policy and for amending schedule -2 for better clarity.

In continuation of our discussion with DDG-Crop Science on Bt protein expression requirements for advancement of Bt cotton hybrids, AAI proposed that protein expression studies may be conducted in different labs.

AAI connected with FSSAI to discuss the impact of delay in formulation of GM Food import regulations and requested the authority to expedite the process.

June 2019

Advocacy and Outreach-

AAI approached Agriculture Commissioner regarding cotton industry issues related to Bt protein expression requirements for advancement of Bt cotton hybrids and challenges in complying with the Refuge in Bag (RIB) in Bt cotton standards as per Government notification.

July 2019

FSII promoted the Asian Solanaceous Round Table that was held in Bangalore through social media and website. The event was held to discuss the latest market trends in the solanaceous crops.

Dr Shivendra Bajaj participated at the 3rd Annual AgriBiotech India Summit 2019 and spoke on the regulatory scenario of Biotechnology on India and its role in managing water scarcity.

FSII delegation also met the Hon'ble Minister of State for Agriculture, Farmers' Welfare and Panchayati Raj, Shri Parshottam Rupala to discuss the challenges faced by farmers and role of technology in increasing farm productivity and income.

Mr Ram Kaundinya's article on the misses and expectations of the agri industry from the Union Budget was covered in The Hindu Business Line.

Through Alliance for Agri Innovation we kept talking about positive stories on GM and other technologies which saw good engagement from our readers.



Advocacy and Outreach-

AAI wrote to PM of India requesting approval of cultivation of genetically modified crops in India.

FSII presented Union Minister of State for Agriculture with five-point programme to mitigate agricultural distress. FSII also approached multiple agencies including Union Minister of Agriculture, Niti Ayog, Chief Minister of Maharashtra and Convenor of committee, CMs of Haryana, Karnataka, MP, UP, Gujarat and Arunachal Pradesh to request for seed industry's representation to the "High powered committee of Chief Ministers for Transformation of Indian agriculture".

August 2019

Event: FSII collaborated with University of Hyderabad and Research and Innovation Circle of Hyderabad (RICH) to discuss the advancement of GM in India

Topic: Current scenario and path forward for GM crops in India

Objective: To deliberate on GM crisis & advancing the technology in India

The event was held in Hyderabad, India and was attended by Dr Dayanand, Dean of the School of Lifesciences, University of Hyderabad (UoH); Dr S R Rao, Regulatory Expert of Biotechnology; Dr Rakesh K Mishra, Director, Centre for Cellular & Molecular Biology (CCMB), representatives from FSII, farmer representative from Shetkari Sanghatana, other farmer organisations, scientists, industry, government officials, students and other stakeholders. The event saw large participation and was attended by over 200 people.

One-on-one interaction of Mr Kaundinya, DG, FSII with media was conducted a day prior to the event to highlight the concern over the technology. The event was also widely covered in the media and major publications like Andhraajyoti, Sakshi, Surya, The Times of India, Business Standard and The Hindu Business Line.

PANEL DISCUSSION ON
CURRENT SCENARIO & PATH FORWARD FOR
GM CROPS IN INDIA

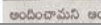
DATE
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VENUE
 CONFERENCE HALL, SCHOOL OF LIFE SCIENCES,
 UNIVERSITY OF HYDERABAD

UNIVERSITY OF HYDERABAD
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హైదరాబాద్ (ఆంధ్రజ్యోతి విజ్ఞానం) : దేశంలో విత్తన పరిశోధన మరియు విత్తనరంగాన్ని ఉన్న దేశాన్ని కాపాడుతూ ప్రపంచ ప్రయుక్తంగా ఉన్న విత్తనములను గురించి ప్రజలందరినీ అవగాహన చేసే ప్రయత్నం చేస్తున్నా (ఎఫ్ఎస్ఎం) డైరెక్టర్ జనరల్ ఆఫ్ రిసెర్చ్ అండ్ డెవలప్ మెంట్ ఆఫ్ ఫ్యూజిల్ ఆర్గనిజ్మెంట్. వ్యవసాయ రంగాన్ని ఉత్తీ కరణం చేయడానికి విత్తన పరిశోధన పర్యవేక్షక ఆధిపత్యం కోసం మహారాష్ట్ర ముఖ్యమంత్రి దేవేంద్ర ఫడ్కర్ విత్తన రంగాన్ని విస్తరించే ఏలూరు కమిటీని రూపొందించాడు. సహజంగా, సహజంగా ఉన్న విత్తన పరిశోధన దేశంలో వ్యవసాయ రంగాన్ని నిర్మించు

Calls for long-term policy direction

K.V. KURUMANNASU
 (continued from page 20)

The Federation of Seed India (FSI) has asked the government to do away with the Ceiling Price Control under a minimum support price (MSP) that agriculture should be treated as an industry.

"The government should interfere in the pricing of agricultural inputs, especially seeds, fertilisers, and leave the pri-

National Agricultural Policy and the expedited of the seed Bill and the much Regulatory Authority of India (RAI) Bill to ensure policy direction and predictability.

'Ineffective regulation'

An ineffective regulatory body demands for intellectual property rights and highly unpredictable policies are adversely impacting the fortunes of seed companies and farmers, the Federation of seed industry of India (FSI), which represents all seed companies, said.

"A policy that provides a legal

Biotech regulation
"Biotech food regulation has not progressed much in the last nine years. As a result technologies such as HT cotton, GM mustard and brinjal haven't progressed much. We need clarity and predictability in approvals," he said.

The government should raise the GM regulatory process. It should develop its GM strategy and intentions very clear to all stakeholders.

The association wants a consultative process to bring alignment and uniformity across states in the implementation of the food acts. "Currently, there is a considerable mismatch between States, especially in terms of product ap-

Subsequent meeting of higher education officials for the World Bank conference was the first time that the 1994-95 academic year meeting was held in a developing country. The meeting was held in the city of Lima, Peru, and was attended by 150 officials from 100 countries. The meeting was held in the city of Lima, Peru, and was attended by 150 officials from 100 countries. The meeting was held in the city of Lima, Peru, and was attended by 150 officials from 100 countries.

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విద్యుత్తులలో ఉమ్మడిగా కార్మికులను నిర్వహించారు.
దిగ్గి హైదరాబాద్ కొమ్మకు ముఖ్యమంత్రి సుమన్

HYDERABAD: University of Hyderabad (UoH), supported by the Research and Innovation Circle of Hyderabad (RICH), organised a panel discussion on the 'Current scenario and path forward for Genetically Modified (GM) crops in India' on 23rd November 2017.

The deliberations by experts and farmers brought forward the necessity for adopting and advancing modern science and technology in agriculture like GM crops in India. It was also emphasised that the government should continuously promote plant biotech research and build capacity for adopting emerging technologies. During the discussion, farmers also expressed their intent and willingness to accept technologies that offer promising and cost-effective solutions to crop loss,

[illegible][illegible]

Blogs

The following blogs and LinkedIn blogs were published in the month of August 2019 - Ensuring sustainable future of food which focused on various ways to improve crop productivity through technological interventions and innovations. Direct Seeded Rice for efficient rice production and growing nutritional crops which are adaptive to climate change.

Ensuring sustainable future of food

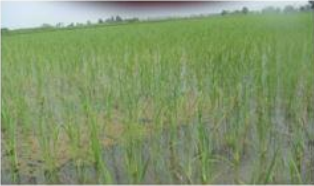
Agriculture in the 21st century is facing significant challenges, most importantly the pressure to feed the growing population. Set to reach 9.8 billion people by 2050, the food demand is estimated to increase by 50%. This burden will be passed on to the developing countries, where resources are limited.

If we want to sustain the food demand, we will have to adopt multiple steps like restoring unproductive land, avoiding deforestation, encouraging technological interventions for seed productivity, resource management, reducing food wastage etc. Therefore, it is consequential that we -

Increase food production without expanding agricultural land

While measures to manage food demand is important, the world must look at ways to boost production of agricultural output without expanding the agricultural land. For this, improvement in crop productivity is essential by deploying technological interventions and innovations.

Direct Seeded Rice (DSR) Technology- A hidden gem




Estimated at 110.15 million tonnes, India set a new record in the production of rice in 2016-17 and this is higher than 2015-16 estimates which stood at 104.4 million tonnes. Further, agricultural exports increased from INR 2,27,14 crores in 2012-13 to INR 2,27,554 crore in financial year 2016-17 registering growth of nearly 0.15%. This success can be primarily attributed to the high exports of rice (both basmati and non-basmati) followed by spices, cotton and sugar.

While the data indicates how rice is an integral part of India - both in terms of production and trading commodity, it is essential to note its impact on natural resources. Conventionally, production of rice is a water intensive activity. Transplanted rice needs to be water logged for at least 1.5-2 inches for 5 weeks post transplanting to control growth of weeds. Due to this practice, 1 ha of rice requires 2000-3000 litres of water. The flooded rice field also leads to greenhouse gas emissions as methane, a potent greenhouse gas is produced by bacteria in the waterlogged soil. During transplantation, farmers use an average of 50 litres/acre diesel which also contributes to GHG emissions. In addition to these, there are different problems like lowering water table, scarcity of labour for transplanting during peak periods and deteriorating soil health that demand exploration of some alternative method to sustain productivity of rice as well as natural resources.

One such technology is the Direct Seeded Rice (DSR) which makes rice production water efficient. DSR Technology, one of the oldest techniques of rice establishment, has a low input demand and in light of the challenges signed above, is gaining popularity again. The technology solves most of the problems - it is less labour intensive, requires less water, less drudgery, helps in early crop maturity, has a low production cost, provides better soil physical conditions for crops and reduces methane emissions.

Adapting to Climate Change

Published on August 8, 2019

 Shivendra Bajaj
Executive Director at Federation of Seed Industry of India

14 articles [+ Follow](#)

Climate change is real.

But this "real" threat is not new and its impact on our lives, communities and businesses should also not be a surprise. The Intergovernmental Panel for Climate Change 2014 report (IPCC report) had warned that unless there is adaptation towards climate change, by 2050 global crop yield is most likely to fall by at least 5% and even steeper by 2100.

This is not the first-time reports have warned reduction in global crop yields due to climate change such as unpredictable monsoons, delayed/ deficit rainfall, prolonged droughts and extreme weather conditions. Increasing food production would mean expanding land under agriculture, unless we allow for technology and innovation to boost yield per hectare.

According to the report Creating Sustainable Food Future 2018 by World Resources Institute, to augment production by 10%, global land under production will have to increase by 457 Mha!

Advocacy and Outreach-

FSII wrote to Principal Secretary – Agriculture, Andhra Pradesh to share industry views regarding establishment of Integrated Agri Testing Labs and Proposed MOU with seed companies.

AAI met officials at DBT and GEAC to discuss the various issues and regulations pending with the said authorities. DBT organized an Interactive session on Institutional Biosafety Knowledge Portal (IBKP) upon AAI request, to address the various issues faced by our members.

September 2019

Event: FSII urges adoption of hybrid rice to increase rice productivity

Topic: Seed Technology Innovation for Sustainable Rice Production

Objective: To discuss ways to enhance rice productivity sustainably and improve farmers profitability in India

The event was held in New Delhi and was attended by Hon'ble Union Minister of State for Agriculture and Farmer's Welfare, Shri Kailash Choudhary; Dr Prem Kumar, Hon'ble Minister of Agriculture, Government of Bihar; Dr SK Malhotra, Agriculture Commissioner, Government

of India and Mr VK Gaur, Chairman & Managing Director, National Seed Corporation. The event saw participation of more than 150 individuals who represented senior government officials, farmer organizations, scientists and industry representatives.

Deliberations at the seminar brought forward the need for long-term research investments in bringing more productive hybrids with improved grain characters, strengthen seed production systems by geographic diversification and take up more intensive promotion of hybrid in new areas through PPP mode.

The event was widely covered in the media and major publications like Business Standard, Punjab Tribune, Punjab Kesari, Pioneer, Rashtriya Sahara, Dainik Bhaskar, Delhi News, Daily Hunt, ANI, UNI etc.



The event was widely covered in the social media through real time tweeting and tagging the Central and State Governments by bringing their focus to the subject. The speakers and guests were also tagged to receive more traction.

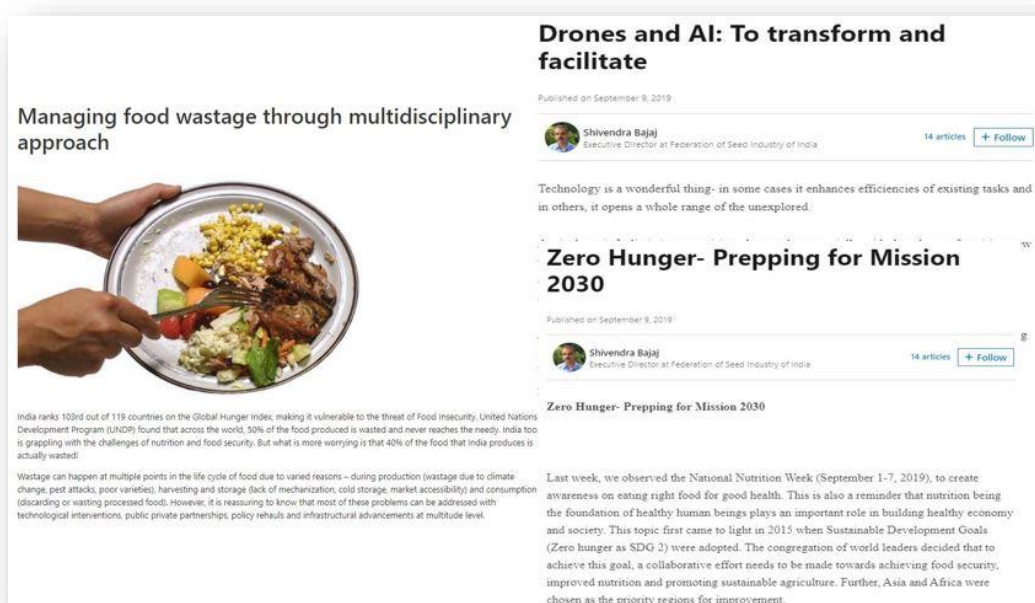


To leverage the event, FSII developed a white paper on the challenges and solutions that were deliberated during the event, a LinkedIn blog and a blog for the website were also developed and cross promoted through social media.



Blogs

The following topics were focussed on blogs and LinkedIn blogs – Managing food wastage through multidisciplinary approach, Drones & AI – for transforming and facilitate and Zero hunger – prepping for mission 2030.



Seed World 2019

Topic: Enabling regulatory environment for International movement of seeds

Objective: To discuss and develop a strategic plan for seed sector advancement

The Indian Council of Food & Agriculture (ICFA) jointly organised the event with FSII, International Seed Federation and National Seed Association of India in Bangalore. Mr Ram Kaundinya represented FSII at the event and spoke about encouraging more R&D investments by seed companies to fight climate change and tackle malnutrition. He also emphasised on ensuring IP protection and creating a predictable regulatory environment



Advocacy and Outreach-

FSII took up the matter of truthful labelling and seed price control with Joint Secretary-Seeds

October 2019

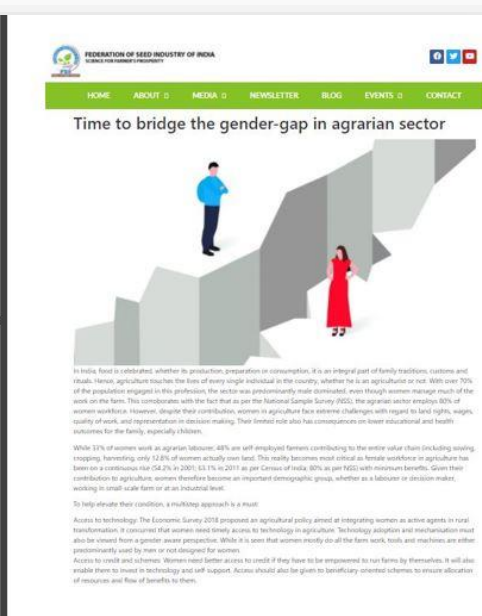
Topic: Regional Expert Consultation on Gene Editing in Agriculture and its Implications on Biosafety Regulation

Objective: To highlight the innovations through gene editing, the impact on the agricultural sector, review status of global regulatory policies of gene editing and enable policies for plant and animal breeding innovations.

The two-day event took place at ICRISAT, Hyderabad and was participated by over 500 individuals. Dr Renu Swarup, Secretary, Department of Biotechnology (DBT) was the Chief Guest at the event. Further, 64 participants from 21 countries (Australia, Bangladesh, Bhutan, China, Fiji, India, Iran, Italy, Lao PDR, Malaysia, Myanmar, Pakistan, Papua New Guinea, Philippines, Samoa, Singapore, Sri Lanka, Taiwan, Thailand, USA, Vietnam) participated in the meeting. The participants included senior officials, researchers from National Agricultural Research Systems (NARS), Consultative Group on International Agriculture Research (CGIAR) Centres, experts on biotechnology, representatives of research institutions, donors, private sector and NGOs. Representative from FSII also participated and presented views of seed industry on gene-editing and urged that too much regulations will have an impact on the seed movement and trade. Therefore, a science based consistent regulatory policy environment is required to gain confidence of farmers and consumers. The key recommendations that emerged from the 2-day deliberations and the discussions were that the genetic variation in the final product should not be regulated when-it does not contain a novel combination of

International Day of Rural Women

FSII celebrated International Day of Rural Women by involving members to share experience of women farmers who have turned entrepreneurs and are running their families, encouraging more farmers to adopt new and innovative methods, imparting knowledge to fellow farmers etc. A video of a women farmer was also shared to showcase the tremendous change that she has brought in her life. Thoughts of FSII's Executive Director was also shared as a quote in the social media. The posts showed participation from various stakeholders and saw engagements.



A blog was also written to show the gender-gap that still persist in the agrarian society and how it can be bridged.

Blogs

Write ups on technologies such as GM, gene-editing, CRISPR have been part of blogs put out by the leadership and the organisation. Awareness and benefits of these technologies are presented at the forefront through our social media platforms. The focus has been on small

India needs genetic modification technology in agriculture



Driving exports to double farmers' income

The last financial year was not very promising for Indian agriculture exports as it nosedived by almost 46% in volume and 50% in value¹. The fall was seen across important crops including wheat, non-basmati rice, groundnut and fresh fruits, reducing the share of agriculture sector in total exports to 11.76% (as against 12.07% in 2016-17)². Many internal and external factors resulted in an overall decline in global food prices which affected this change. However, the experience brought to light the need to continuously focus on agriculture as a sector, to ensure we are able to retain our dominating position in exports of important crops.

Traditionally, India has been an important agrarian exporter for the world economy. While rice, sugar and cotton are important exports for India, over the years the country has become an important exporter of soybean, corn, wheat and guar gum.

Streamlining agri-credit infrastructure

The deadline we set for doubling farmers' income (by 2022) is knocking at our door. Since our honorable PM announced the vision, the agriculture sector is going through a fast-paced growth. From the advent of ICT, expensive investments in infrastructure to upskilling of farmers, a multi-pronged approach is being taken. One of the critical areas, however, is the agriculture credit system, which we need to streamline.

Availability of credit, its access and the ability to pay it, is extremely critical for the advancement of any sector. Even in agriculture, credit is an important enabler to sustain the growth momentum. In India, however, the reality differs. Agri loans and inability to pay the loans, are some of the biggest challenges. The socio-economic implications are as a consequent subject. Agriculture often gets stuck in the ideologies of the central and state government, and over time we have seen solutions are preferred over long term. Even to deal with credit, government schemes either to promote loans (such as subsidised interest) or help farmers with waivers. Unfortunately, neither of these have contributed to build a self-sustainable agricultural credit system.

RBI conducted a study in September which found out that the challenges are, firstly, agricultural loans are diverted for non-agriculture purposes. Secondly, small farmers have access to credit, making the entire system skewed, in favour of large and rich landholders. With more than 50% of the population in agriculture or allied sectors for their livelihood and more than 70% of their income, these findings are not reassuring.

India needs GM Technology.



According to the latest report by ISAAA, "The State of Commercialization of GM Crops 2018", biotech crop area increased almost 113 times since 1996. With an accumulated biotech area of 2.3 billion ha, biotech crops are now grown in 29 countries. However, as many countries opened their doors to new and existing biotech crops, India continues to not open its doors and issues with trials of GM Mustard, on the other hand, India continues to be the leader in export of biotech crops, such as soybean, cotton, and maize.

Stubble Burning: An annual story

Dr Shivendra Bajaj, Executive Director, Federation of Seed Industry of India

As stubble burning season in Punjab and Haryana begins once again, the concerns of poor-quality air grip the nation. Delhi Government, National Green Tribunal and Central Government are once again enforcing measures such as ban on burning, fines, financial aids and "odd-even" to address the situation. Despite being banned since 1962, stubble burning has gone to become a cyclical and annual phenomenon and now merits more than these short-term solutions. Looking at this grave situation, one needs to look at long term solutions and prepare for them in advance.

What is stubble burning?

Every year, August onwards, farmers are left with straw on their fields, post harvesting their rice, wheat and other crops. This straw is "waste" and farmers, especially the marginal and small-scale farmers, are left with little choice but to burn them. However, this leads to excess pollution and affects nearby states like Delhi. Apart from health impact, stubble burning also leads to loss of nutrients from the soil, further impacting the nutrition of the crops that are grown thereafter. This lasting environmental and health impact forces us to view stubble burning as impeding to our nutrition and food security as well.

Technological solutions

Long term solutions for stubble management require technological interventions which empower farmers- small scale and big, alike. Farmers must be encouraged to use combined harvesters with adjustable cutting bars so that they can harvest crops closer to the ground. The government has been seen to promote machines such as happy seeders, mulchers and straw-shredders in this regard. This way, to begin with, the amount of straw leftover is minimal.

scale farmers, equipping them with right knowledge and technologies for their benefit. Research papers by agri experts on these technologies are also highlighted through articles, blogs, websites and social media. LinkedIn blogs focused on stubble burning, steps that should be adopted to boost exports, streamlining agri credit infrastructure were some of the issues on which the blogs were written and subsequently published.

Advocacy and Outreach-

FSII took part in stakeholder meeting on Seed bill 2019 and submitted their recommendations to Union Minister, Ministers of State and JS-Seeds

AAI submitted comments and suggestion on the draft GM food import regulations to CEO-FSSAI and met with Advisor-FSSAI regarding the same

FSII took part in meetings organized by the Ministry of Agriculture to develop India's position in the ITPGRFA meeting to be held in Rome in November, 2019

Participation in International Seed Federation mid-year meeting in Amman, Jordan – Dr Shivendra Bajaj participated in the ISF mid-year technical meetings held in Amman, Jordan from October 19-23 and update the members on Plant Breeding Innovation and Sustainable Agriculture Committee. He also represented FSII in ISF National Seed Association meeting.

November 2019

FSII celebrated World Science Day with creatives, blogs and LinkedIn blogs focused on drones, AI, sustainable techniques to produce plants such as hydroponics, importance of soil to grow quality food and articles focused on food wastage.

FSII leadership also spoke to the media to oppose the price control under the proposed Seed Bill, emphasising that price control will result in scale back of research investment.

Shivendra Bajaj also participated at the 8th session of Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture held at Rome.

Shivendra Bajaj also represented FSII in Asian Seed Congress organized by Asia Pacific Seed Association held in Kuala Lumpur, Malaysia. Shivendra was the invited speaker in the technical session on Access and Benefit Sharing and updated India's developments on this topic. Shivendra also made a presentation in the National Seed Association meeting in the Asian Seed Congress. He was also the winner of the 3.2 Km fun run organized by APSA during the seed congress.

Seed companies oppose price control under proposed Seed Bill

Managing food wastage through multidisciplinary approach - Dr Shivendra Bajaj, Executive Director, FSII

EXPER SOLUI

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Federation of Seed Industry of India (FSII) @FSII_In... · Nov 11, 2019

.@shivendrabajaj1 is at the 8th session of Governing Body of the "Internation Treaty on Plant Genetic Resources for Food and Agriculture", hearing Shri @nstomar at the plenary session @agrigo. #ITPGRFA @planttreaty. More about the event bit.ly/33BRBIN



Agriculture INDIA and 3 others



Advocacy and Outreach-


AAI connected with JS and Vice chairperson GEAC regarding various pending guidelines.

December 2019

The year ended with a positive note where FSII was widely covered through articles written on various topics such as Conservation Agriculture and various ways for farming in future. The article got covered in Dainik Bhaskar, Pioneer, Dainik Savera, Andhra Prabha, Prajapaksha, Surya, The Hans India, Vaartha and Agrospectrum.

While celebrating World Soil Day, various blogs and LinkedIn blogs were also written around Hydroponics, Aeroponics, how food is grown in space, determining the quality of harvest through soil, driving exports to double farmer's income and the trends that will be picked up in Agriculture in 2020.

Aeroponics: Growing food without soil




Soil has always been an integral part of the food production ecosystem. However, over the years as agrarian practices have intensified, the quality of soil has deteriorated due to inadequate replenishment of soil nutrients.

Since the early 1970s, researchers and botanists have been exploring the possibility to grow food without soil, which laid the foundation for future research in Aeroponics. Aeroponics, essentially, is a method to grow food in a soilless environment, with very little water.

Interestingly, aeroponics was first explored in 1920s when scientists wanted to study the root structure of plants. But the method did not gain more formal interest until the 70s, when behind the scenes research was going on; it was only in 90s when NASA supported a small project, that the method received widespread interest and recognition as a potential method to grow food.

How does it work?
Aeroponics involves a cardboard, Rockwool and some water. Seeds are allowed to germinate on a board with equidistant holes with soilless medium like Rockwool. As the plant grows, roots are allowed to grow below in an enclosed chamber which holds the nutritional


Believe it or not: Growing food in space



The Mission held a lot of interest of the audience when Matt Damon found a way to grow food on Mars. And that's the beauty of science. Believe it or not, as the audience marvelled at the thought of growing food on Mars, scientists on Earth were making it happen.

Trends in Agriculture: Gearing for 2020

Published on December 11, 2019

 **Shivendra Bajaj**
Executive Director at Federation of Seed Industry of India

14 articles + Follow

Indian agriculture is an important contributor to the economy. As we sit at the juncture of another decade, what would be the changemakers in agriculture?


Here's a look at the 4 trends that I feel would shape the destiny of Indian agriculture in 2020.

Hydroponics – grow your plant without soil

This blogpost is part of a 4-post series where we are celebrating the role of science in agriculture. World Science Day is observed every year on November 10 as a reminder for us to acknowledge and appreciate the role of science in our lives.


Like all industries, the future of agriculture is also dependent on innovation and science. Today, the sector is facing multiple challenges, the most critical being availability of land. With urbanization and industrialization, the available land for agriculture is deteriorating and scientists have been investing efforts to produce more with less.

One promising innovation that is readily being adopted by young farmers, urban enthusiasts and small farm collectives is hydroponics. Let us now understand how and why hydroponics is so popular.



Data Preserved in Soil

Published on December 6, 2019

 **Shivendra Bajaj**
Executive Director at Federation of Seed Industry of India


14 articles + Follow

Health of the soil is a crucial element in determining the quality of the harvest. With availability of limited land for agriculture, soil health becomes even more important to harvest nutritious and healthy crops along with good harvest. Hence, as we integrate technology and artificial intelligence in agriculture, its application can be leveraged to understand the soil better.

Digital soil mapping (DSM) is a very interesting application of AI in agriculture, as it documents spatial information of the soil and provides accurate and quantifiable information


Driving exports to double farmers' income


Published on December 6, 2019

 **Shivendra Bajaj**
Executive Director at Federation of Seed Industry of India

14 articles + Follow

The last financial year was not very promising for Indian agriculture exports as it nosedived by almost 46% in volume and 50% in value[1]. The fall was seen across important crops including wheat, non-basmati rice, groundnut and fresh fruits, reducing the share of agriculture sector in total exports to 11.76% (as against 12.07% in 2016-17)[2]. Many internal and external factors resulted in an overall decline in global food prices which affected this change. However, the experience brought to light the need to continuously

 **Federation of Seed Industry of India (FSII)** @FSII_India · Dec 5, 2019
#WorldSoilDay is a reminder of the important role #soil plays in #agri and our lives. #smartagriculture is imp to retain #nutrition of the soil and #crops. #zerohunger



कृषि की वित्तीय सेहत बढ़ाने के लिए कृषि संरक्षण को अपनाएं : डॉ. शिवेंद्र बजाज

शिवेंद्र (आगरा विभाग) की अध्यक्षता में आयोजित कृषि उद्योगों की वित्तीय सेहत बढ़ाने के लिए डॉ. शिवेंद्र बजाज ने कहा कि कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं। उन्होंने कहा कि कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं।



डॉ. शिवेंद्र बजाज ने कहा कि कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं। उन्होंने कहा कि कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं।

कृषि संरक्षण को अपनाएं जल्दी बजाज

कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं। उन्होंने कहा कि कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं।



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DR. RAM KAUNDINYA
Director General,
Federation of Seed Industry of India



DR. RATNA KUMRIA
Director of Biotechnology,
Federation of Seed Industry of India

Organic, ZBNF, Biodynamic or GM – Way for future farming in India

The challenges of meeting the food security and nutritional security of the country in a profitable way for the farmer and in an environmentally sustainable way are enormous. We have to get ready to feed 150 crore population in the next ten years, with the bottom of the pyramid requiring food.

वित्तीय सेहत बढ़ाने के लिए कृषि संरक्षण को गले लगाईए

डॉ. शिवेंद्र बजाज, एग्रीकल्चरल डायरेक्टर, फेडरेशन ऑफ़ सीड इंडस्ट्री ऑफ़ इंडिया (एफएसआईआई) ने कहा कि कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं।



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कृषि की वित्तीय सेहत बढ़ाने के लिए कृषि संरक्षण को अपनाना जरूरी बजाज

कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं। उन्होंने कहा कि कृषि उद्योगों को अपने वित्तीय स्वास्थ्य को बढ़ावा देने के लिए कृषि संरक्षण को अपनाएं।



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‘विंटी ग्रुप वयाउट लयी धेडी सुर्खिया अपराट’

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Advocacy and Outreach-

FSII submitted a letter to Secretary Agriculture and JS- Seeds regarding Potential Challenges in complying with the Refugia in Bag (RIB) in Bt Cotton. Also, letters were submitted to Chairman-NBA detailing the issues to be discussed during brain storming session on Access and benefit sharing Mechanism for seed sector

In a major achievement, the National Biodiversity Authority agreed to FSII request and organized a stakeholder meeting with seed industry on the issues faced by the industry. Shivendra Bajaj made the presentation on behalf of FSII.

January 2020

The United Nations declared the year 2020 as the International Year of Plant Health (IYPH) and FSII took the opportunity to engage. A yearlong campaign was planned for awareness and education of our stakeholders in this subject. Therefore, content was created around it.

FSII also issued a press release urging Government of India to restore the 200% income tax deduction (under the section 35 (2AB) of the Income Tax Act, 1961) for the in-house Research and Development (R&D) expenditure in seed industry in the upcoming Union Budget. Further, it has also been highlighted that India too has a well-developed seed industry, varied agro climatic conditions, seed production expertise and the necessary infrastructure which can make India a global seed export hub. The story was carried widely and appeared in The Hindu Business Line, Outlook India, Business Insider, The Financial Express, UNI etc

Industry Meetings: Dr Shivendra Bajaj participated in the Industry meeting organized by Croplife International held Washington DC and presented India's situation on biotech. Shivendra also met with representatives of American Seed Trade Association (ASTA) and

Advocacy and Outreach-

FSII met with Union Minister, Minister of State and Secretary Agriculture to submit recommendations for the upcoming Union Budget for the growth of Indian seed sector. We also connected with JS-Seeds requesting for convening the meeting of the committee under the cotton seeds price (control) order, 2015 to recommend the maximum sale price of Bt cotton seed for the year 2020 and uniform sampling procedures for testing Bt protein in Refugia in Bag (RIB) for cotton hybrid seed.



February 2020

Banaras Hindu University Event

Topic: GM Crop Biosafety Evaluation and Challenges with Focus on Farmer's Livelihood

Objective: Re-initiate discussion on access to good quality seed including GM crops

An extempore competition was held where 11 participants were shortlisted for the final competition. Students actively participated in the competition and came forward to share their views on the topic. The research scholars from the Genetics & Plant Breeding (GPB) stream spoke about the cultivation of GM crops and urged to use the potential in utilizing the Genetic Engineering technology to harvest better products. Some participants also focused on the need of the development of GM crops so as to meet the food requirement of the ever-increasing population. They also discussed about the Bt cotton cultivation by farmers the ill-effects caused by it, the genetic pollution and the hazardous effect to animals and human. The limitation of conventional breeding was also explained as one of the reason behind development of GM crops. The climate change as a major challenge was also put forth by the students and they supported the notion that growing of GM crops assures desirable yield to the farmers in this situation. Some students discussed about the myths and the lack of awareness regarding GM crops cultivation in our society.



The Hindu Business Line Summit

Topic: Re-Imagining India's Agriculture

Objective: To analyse the issues confronting the agriculture sector, map out the complexities of the problem, chart out strategies and discuss the necessary policy interventions to provide way



ahead for farmer-producers and industry partners.

From FSII, Mr Ram Kaundinya, Director General, participated in a panel discussion on Balancing farm productivity & sustainable agriculture. The other panellists who were part of the discussion were Mr Nasim Ali, CEO, Plantations Business, GodrejAgrovet; Mr GV Ramanjaneyulu, ED, Centre for Sustainable Agriculture; Mr John Mathews, President-Marketing, T Stanes and Mr Simon Wiebusch, COO, Bayer.

Stakeholder Dialogue organised jointly by Trust for Advancement of Agricultural Sciences (TAAS) and Indian Society of Seed Technology (ISST).

Topic: Stakeholder's dialogue on Way Forward for the Indian Seed Sector

Objective: To discuss major constraints and find possible solutions for faster growth of Indian seed sector, seek views of different stakeholders on the revised draft "Seed Bill 2019", suggest measures to strengthen seed health and seed quality assurance system in the country, and review options of promoting seed export from India.

Dr M Ramasami, Chairman, FSII spoke about private sector's contribution in the seed industry and Mr Ram Kaundinya, Director General, FSII presented his view on the regulatory reforms for growth of Indian seed sector.



Topic: International Conference on Pulse as the Climate Change Crops: Challenges and Opportunities at Bhopal, India

Objective: To address long-term sustainability of global agricultural production system through diversification/intensification of crop/farming systems with pulses through an eco-friendly approach. To address the critical gaps in understanding the production constraints, issues of eradication of protein malnutrition for food deprived people, application of modern genetic tools and biotechnological interventions for pulses improvement and in-depth insight

for underline principles of adaptation of pulses to diverse climatic condition. Policy issue, PPP, ICT and social networking including the need for critical support systems were also addressed.

FSII was a co-sponsor of the event and was represented by Dr Shivendra Bajaj.



FSII's Reaction on budget and review of cotton seed price

FM gives mini doses of joy to biotech players

TNN | Feb 2, 2020, 04:22 IST

However, Ram Kaundinya, director general, Federation of Seed Industry of India (FSII), rued the lack of structural reforms in agri-biotech sector. "While the FM said that they wanted to make the Indian farmer competitive, she did not talk about using modern science and technology in seeds..."

Kaundinya also expressed scepticism about the government's emphasis on Zero Budget Natural Farming (ZBNF) stating that it cannot take our farmers towards global competitiveness and financial security.

Government to review cotton seed price

Both the National Seed Association of India (NSAI) and Federation of Seed Industry of India (FSII) have asked the government to raise cotton seed prices.

"Cotton seed price should go up by at least 5-10 per cent to reach Rs 770-800 per 450 gm pack. Cost of labour accounts for 60 per cent of the cost of seed production, and it has gone up in the recent past. We feel that there is a need to increase seed price to meet the higher cost of production," NSAI president M Prabhakar Rao told ET.

The hike in minimum support price of cotton has also led to rise in seed production, said Ram Kaundinya, director general, FSII. "Ideally, we want the price control order to be revoked as it has resulted in reduction in research investment by both biotech and seed companies. But if it continues, then seed prices should increase by 10 per cent to Rs 800-810 per 450 gm packet to offset the cost of seed production," said Kaundinya.

Emphasis on new crop technologies to boost India's climate action - Dr Shivendra Bajaj-FSII

Outlook

THE NEWS SCROLL

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Agri industry & experts give mixed bag of response on budget

The measures mentioned will help sustain growth of milk production by more than 8 per cent and also reinforces the intent of the government that the dairy sector continues to play a stellar role in realising the goal of doubling farmers' income, he added.

Stating that the budget was a "mixed bag" for agriculture, the Federation of Seed Industry of India (FSII) Director General Ram Kaundinya said it is "disappointing" to note the continued emphasis on Zero Budget Natural Farming (ZBNF) to a paucity for farmers.

"While the FM said that they wanted to make the Indian farmer competitive, she did not talk anything about using modern science and technology in seeds, increasing farm mechanisation and other inputs which are essential for this," he added.

Edible oil industry body NIA said it was expecting at least this year the government will come out with a package of incentives for higher production and productivity of oilseeds to reduce our dependence on import of edible oils.

इफको ने सहकारी कर घटाने का किया स्वागत नई दिल्ली (वार्ता)। इफको के प्रबंध निदेशक उदय शंकर अवस्थी ने शनिवार को आम बजट पर प्रतिक्रिया में कहा कि इफको से 36000 सहकारी समितियां जुड़ी हैं और वह सहकारी कर घटाने के प्रस्ताव का स्वागत करते हैं। उन्होंने वित्त मंत्री को सहकारिता क्षेत्र की खोज खबर लेने के लिए बधाई दी है। एफएसएसआई के अध्यक्ष डा. रामासामी ने कहा कि वित्त मंत्री द्वारा पेश बजट में कृषि पर विशेष रूप से ध्यान दिया गया है। यह अन्य बजट से काफी अलग है। कृषि पर ध्यान केंद्रित किए जाने से सरकार को किसानों की आय दोगुनी करने में मदद मिलेगी। उन्होंने किसानों को वैश्विक स्तर पर प्रतिस्पर्धी बनाने और उन्हें बाजार तक सीधी पहुंच प्रदान किए जाने का स्वागत किया है।

Budget for 2020-21 focuses on agriculture in substantial manner: FSII

New Delhi, Feb 1 (UND) The budget for 2020-21 has focused on agriculture in a substantial manner, the Federation of Seed Industry of India (FSII) said on Saturday.

"We welcome this focus on agriculture and on doubling farmers income, making farmers globally competitive and giving them free access to markets. We very much welcome the Finance Minister's statement that unnecessary interference of the Government in markets is to be reduced, an objective which was enshrined in the Economic Survey too," FSII chairman Dr Ramasami said.

Finance Minister Nirmala Sitharaman presented the Union Budget for 2020-21 in Parliament today.

Ram Kaundinya, Director General of FSII, said, "The budget is a mixed bag for agriculture. The 26 action points are well crafted. Especially the points related to the following are very much welcome: Creating projects for 100 water stressed districts, generation of solar energy on farms and waste lands through PM Kisan Scheme, creating warehousing at the Taluk and local level in PPP mode, establishing seamless cold chain with the involvement of Indian railways who will introduce refrigerated coaches, Krishi Udan to link farmers with domestic and international markets for perishable commodities, Horticulture clusters at each district level and linking

Advocacy and Outreach-

FSII continued with its efforts for early fixing of cotton seed price with JS-Seeds and also took up the query on the dimensions of the Truthful Label on the Seeds Container/package-Specifications for the size, contents, colour, mark or label to be affixed on the Seeds Container.

FSII also write to Advisor and Director Plant protection requesting for declaration of 'Country free from specified pathogens' for ToBRFV and four poispivirids as quarantine requirement for export of Tomato and Capsicum seed to USA and EU.

FSII participated in Industry Consultation on Digital Sequence Information organized by NBA and submitted FSII and international positions on ABS. A letter was also submitted to Secretary NBA on implementation of BDA.

AAI submitted comments for the Draft regulations for the Gene editing in agriculture.

March 2020

FSII engaged with members and run a weeklong campaign on International Women's Day to showcase how women are contributing to the seed industry which is predominantly dominated by men.

With lockdown imposed across the country due to Covid-19, FSII engaged with the Government of India and respective state governments to free the restriction rules for the movement of agri inputs. The news was widely covered and got published in The Financial Express, The Economic Times, Business Standard, The Hindu Business Line, The Times of India, Nav Bharat, Pune Express, Dainik Adhikar, Dainik Bhor, Dainik Navjyoti, Rajasthan Patrika, Andhra Prabha, Prajashakti, Sakshi etc

एफएसआइआई: कृषि इनपुट में सहयोगी की मांग नई दिल्ली, फेब्रुअरी ऑफ इंडस्ट्री ऑफ इंडिया (एफएसआइआई) कोविड-19 को फैलाने से रोकने के लिए भारत सरकार द्वारा किए गए प्रयासों का समर्थन करता है। अगले तीन माह किसानों के लिए एवं देश में खाद्य सुरक्षा के लिए बहुत महत्वपूर्ण है, क्योंकि किसान इस समय खरीदों के मौसम की तैयारी कर रहे हैं। बीच उसी माह सुनिश्चित करने के लिए काम कर रहा है कि किसानों की जरूरतों को पूरा करने के लिए चीजों का पर्याप्त उत्पादन, प्रोसेसिंग, पैकिंग, परिवहन एवं वितरण उपलब्ध रहे।

कृषि इनपुट के निरंतर संचार बनाए रखने व

नवी दिल्ली, फेब्रुअरी 2020 कोविड-19 को फैलाने से रोकने के लिए भारत सरकार द्वारा किए गए प्रयासों का समर्थन करता है। इस बात को हमारे सभी सदस्यों को पता चल रहा है। हम इन प्रयासों को सफल बनाने के लिए बहुत उत्साहित हैं। क्योंकि किसान इस समय खरीदों के मौसम की तैयारी कर रहे हैं। बीच उसी माह सुनिश्चित करने के लिए काम कर रहा है कि किसानों की जरूरतों को पूरा करने के लिए चीजों का पर्याप्त उत्पादन, प्रोसेसिंग, पैकिंग, परिवहन एवं वितरण उपलब्ध रहे।

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अंतराष्ट्रीय अर्थी संयार ज्ञानवी राभव माटे कथु निवेदन

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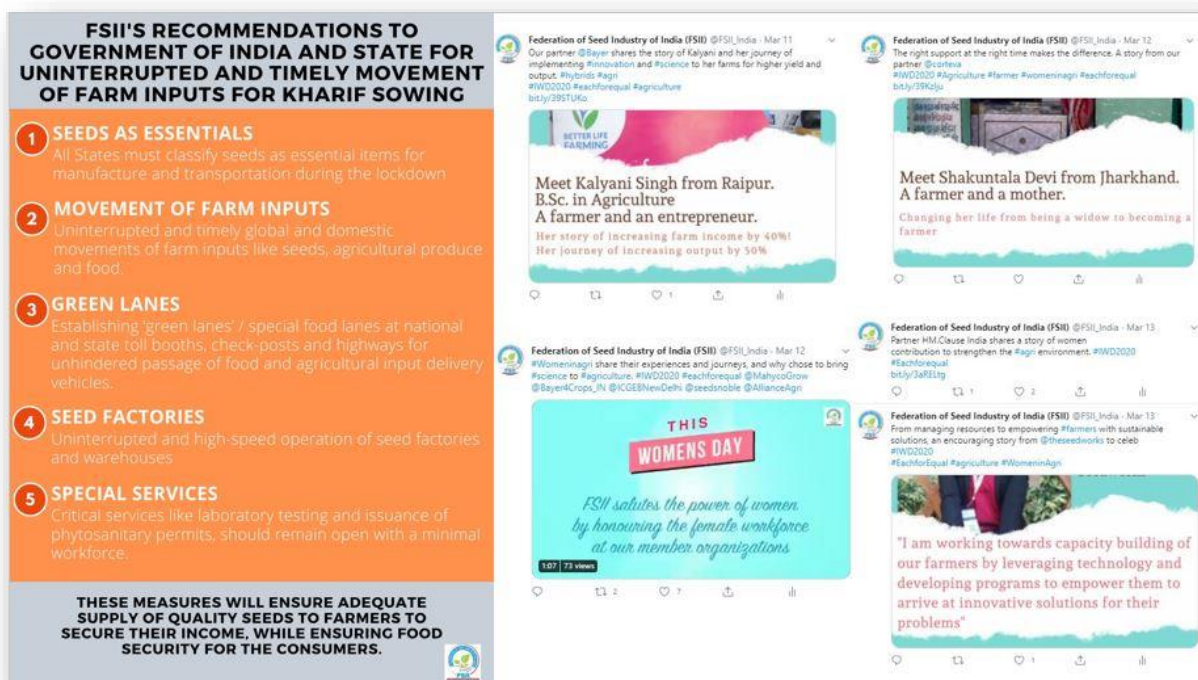
Seed makers demand free movement of agri inputs ahead of kharif season

FE BUREAU New Delhi, March 23

MANUFACTURERS OF SEEDS have requested the government to ensure transportation of agri inputs so that there is no roadblock due to the measures being taken to handle coronavirus. Since these three months are critical for farmers to prepare for kharif season, the seed industry has sought government's help to ensure there is adequate production, processing, packing and transportation, and timely supply of seeds to meet demands.

"The government must support uninterrupted high-speed operations of seed factories especially in Telangana, Andhra Pradesh, Maharashtra, Gujarat, Karnataka and Tamil Nadu. The government may consider allowing officials, which provide critical services like laboratory testing and insurance of seeds, to move freely across the country," said the seed makers.

Several states have champed down on movement of people by ordering complete lockdown in different states while the Centre has suspended train and flight services until March 31. The entire MCOF Delhi has been closed except for some essential services. In a letter to the Union agriculture ministry and various state governments, FSII has said that seeds should be allowed access to



Advocacy and Outreach-

FSII wrote to DG-ICAR regarding collaboration between seed industry and ICAR.

AAI participated in stakeholder meeting organized by DBT on draft guidelines on gene editing for agriculture, where we reiterated our position.

AAI also connected with DBT regarding the guidelines for stacked GM events.

Post lockdown FSII actively connected with Union minister for Agriculture and Union minister for Health regarding the continuation of seed movement and agricultural operations. Similar requests were sent to JS seeds too. To smoothen the seed import for R & D purposes during lockdown, we connected with NBPGR.

FSII also reached out to DPIIT control room for support for smooth seed movement and operations. We also write to Special Secretary-Agriculture for banking services to support agricultural operations during lockdown.

April 2020

FSII participated in the International Campaign run by CropLife Asia to celebrate the Food Security Frontliners in Covid19. Mr Ravichnadrana and Mr Ganesh Nanote were shortlisted and featured as the two farm heroes from India.

Other media opportunities included an interview of Dr Shivendra Bajaj with Seed World and Mr Ram Kaundinya with Agriculture Today. A press release was also issued to showcase the contribution by FSII members towards Covid 19 relief measures. It was widely covered in media and was published by Deshbandhu, Sanjivani, Vir Arjun, Samyuktha Karnataka, Sanje

prabha, Trinity Mirror, Southern Mail, News Today, Dina Bhoomi, The Times of India, Sakshi, Vaartha, Andhra Prabha, Prajapaksham, Aadab Hyderabad etc.



Advocacy and Outreach-

FSII reached out to Union government for urgent policy support during the COVID pandemic as well as smooth operations of seed businesses.

FSII connected with JS-Seeds via video conferencing to put forward our issues in various aspects of the business and their impact. There was an independent connect on seed export too.

We also connected with NBA, PPVFRA, NBPGR, multiple ICAR institutes, GEAC and JS-Seeds on Digital Sequence Information and continuing Public-Private Partnerships within the seed sector.

May 2020

FSII welcomed the new initiatives on agri market reforms, price and quality assurance and the reaction was widely covered in the media. Mr Ram Kaundinya's one-on-one interview was conducted with The Economic Times and his article on new crop plan policy by Government of Telangana, Time for Mechanisation and automation and on long awaited agricultural reforms were also published. Dr Shivendra Bajaj's article on Need for GM crops in India and Need for Innovative Technology in agriculture were also published. An article on Growing quality food & Meeting nutritional requirements through Urban Agriculture were co-authored by Dr Ratna Kumria and Dr Shivendra Bajaj.

Further, Mr Ram Kaundinya also moderated a webinar on Approaches and strategies to support Vegetable Farming Post Covid 19 organised by FICCI.

Dr Shivendra Bajaj joined experts from Asia Pacific countries to discuss Impact of Covid 19 on seed trade, a webinar organised by The Asia and Pacific Seed Association (APSA) and made a presentation about India's situation.

BEE-ING GOOD

POLLINATORS SUPPORT PRODUCTION OF 87 LEADING FOOD CROPS WORLDWIDE, ESTIMATED AT US\$235-US\$577 BILLION A YEAR

Source: FAO 2019

WORLD BEE DAY

20 May 2020

Federation of Seed Industry of India (FSII) @FSII_India · May 11

RT @FAO: Smallholder farmers need support to manage tough #COVID19 situations. Here's how you can help...

FAO @FAO · May 4

Smallholder farmers are on the frontline keeping the food supply chain running during #COVID19. Restrictions on movement are keeping them from selling products.

6 ways countries can support smallholder farmers during this crisis

bit.ly/20XZ2zv #FADpostCOVID19

Long awaited agricultural reforms bring cheer to the sector

May 16, 2020, 12:00 PM IST

Ram Kaundinya · Agriculture Markets · Economy India · TV

PSII welcomes the reforms announced by the Government of India to boost the agriculture sector and help farmers become independent and realize better returns on their investments. The role of science, technology and innovation will be important to strengthen this ecosystem in the long run.

RELIEF MEASURES FOR AGRICULTURE DURING #COVID19

Amendments to Essential Commodities Act to enable better price realization for farmers

Here agriculture companies by manipulating agriculture food stuff such as cereals, pulses, oil, pulses, oilseeds and imposing stock limits under exceptional circumstances.

Agriculture Marketing Reforms to provide marketing choices to farmers

Form a central law to provide adequate choices for farmers to sell at attractive prices, create barrier free inter state trade and create a framework for e-trading of the produce.

Agriculture produce Price and Quality Assurance

Push for farmers to engage with processors, farmers etc and mitigate risks, ensure returns and destination quality.

AN OPEN LETTER TO THE UN, G-20, AND NATIONAL GOVERNMENTS ON COVID-19 AND AGRICULTURE FOR FOOD AND NUTRITION SECURITY

Climate Change

Paradigm shift in national priorities to re-emphasize the importance of conserving natural resources, especially agro-biodiversity, improving soil health, generation of renewable energy...

Science Technology Innovation

Research for new technologies, not of the box ideas such as single cell proteins and bio-fuels from algae. Revolution in AI and biology can help provide food security to all.

Nutrition

Entire families can benefit from the realization of women's rights to health, as their children will grow more healthy and avoid stunting...

Disruption of Input Supplies

Urgent action for adequate credit to access farm inputs such as seeds to enable farmers to deliver. Storage and distribution needs to be strengthened to the production can meet the demand.

Role of international communities

While agencies such as WHO and donors such as EU play an important role, action can be mobilized by involving groups such as CGIAR to enhance global research systems.

Regulating Crops doesn't Guarantee Better Profitability for Farmers

Focus on cotton

Exporting cotton to meet the needs of the world's textile industry

Dr. Shivendra Bajaj

1000 करोड़ की योजनाओं से किसानों को मिलेगा लाभ

किसानों के पैसा बचाने में यह कदम

Outlook THE NEWS SCROLL

14 MAY 2020 Last Updated at 2:15 PM | SOURCE: IANS

Growing quality food & meeting nutritional requirements through urban agriculture

Growing quality food & meeting nutritional requirements through urban agriculture

Can climate-controlled freight containers help in farming or can plants grow without any soil? The answer lies in Urban farming. It involves indoor cultivation under controlled conditions with up to eight harvests in a solution for regional or community specific food needs, for local crops that would not be commercially cultivated. It can also help cities become self-sufficient in their produce demand while getting fresh food in urban farming whether with soil or hydroponics-based, increases the space utilization by 3-4 fold with lower water. Therefore, it allows the farmer to have 4-6 fold higher area with 20 per cent faster growth rate, leading to 3-4 x would lead to higher profits compared to traditional farming. Indoor farms may hydroponic-based polymers for growing vegetables depending on the growth requires

भारत सरकार की नया कृषि नीति

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Entrepreneurship in agriculture can do wonders for rural economy

Agriculture entrepreneurship can help tackle the challenges related to information dissemination, farm management, capital availability, mechanisation of farm and the agriculture supply chain, writes, Dr Shivendra Bajaj, Executive Director, FSII

Time for greater mechanization and automation

The current crisis will also pass like many before. But we should use each crisis to learn lessons and improve our working and our lives in general. The industry should review this experience and use it as an opportunity to bring transformational changes in the way we work in future. We have to definitely reduce dependence on manual labour and bring greater mechanization of seed production operations and greater automation in seed processing and packing. There is a need to diversify production locations across the country and avoid concentration in a few states so that such emergency situations can be handled better.

DR. RANI KAUNDINYA
Director General, Federation of Seed Industry of India (FSII), New Delhi

Industry welcomes government agriculture reforms under Atma Nirbhar Bharat initiative

With the government announcing initiatives during the COVID 19 crisis, the industry welcomed the steps taken to reform the agriculture & allied sector.

Federation of Seed Industry of India (FSII) @FSII_India · May 28

During the COVID 19 crisis, the industry joins experts from Pakistan and China, to discuss the impact of #Covid19 on #Seedtrade. @APSAtweets

bit.ly/3gragRt

MUMBAI, 16 May 2020: With the government announcing initiatives during the COVID 19 crisis, the industry welcomed the steps taken by the government to reform the agriculture & allied sector.

Welcoming this, Federation of Seed Industry of India (FSII) chairman Dr M Ramasami said, "Setting up of 100-200 crore agricultural infrastructure and Rs 10,000 crore scheme for the horticulture, micro food enterprises and amendment of the essential commodities act will bring a renewed focus on agriculture farmers' welfare."

Advocacy and Outreach-

FSII reached out to JS-Seeds regarding Seed export /import activities impacted by COVID 19 lockdown as well as to NBPGR on R & D related seed import.

FSII connected with Additional Director and Special Commissioner agriculture in AP regarding Seed Control Order (1985) – Issuing stop sales for premium hybrid Chilli seeds - positioned at Private Dealer Outlets in the district of Guntur.

AAI wrote to GEAC chairperson to expedite the formulation of regulations for GM feed import, similarly we connected with Chairperson FSSAI regarding the GM food import regulations that are pending with the authority.

June 2020

The month was filled with interviews and articles of the leadership in the media. The topics that were covered were – preparation of Kharif sowing, Importance of pulses, Importance of plant architecture for sustainable agriculture, India need oilseeds mission, Rural entrepreneurship through agriculture, Skill development in agriculture for a self-reliant India and Covid 19 crisis an opportunity to upgrade agriculture sector.

FSII also started an interview section called 'Thoughts & Views' to capture the views of experts in the agriculture sector. We started the section with the interview of Dr Siang Hee TAN, Executive Director, CropLife Asia.

Early sowing in Maharashtra, brisk activity in other states

The final of a two-part series looks at how farmers are hoping a good monsoon will help make up for lockdown disruptions and losses

By Ram Kaundinya
After the lockdown, farmers in Maharashtra started sowing their Kharif crop early to take advantage of a late monsoon season. Kharif sowing usually begins here around June 15, nearly a week after the monsoon was to begin, June 10. However, this year farmers pushed their fields in advance for sowing the short duration crop in the hope that good rainfall would yield a good harvest. This decision to sow early, at least in some parts of

lockdown disrupted the supply of seeds from India to the districts and the farmers. Farmers were compelled to use conventional seeds that they had stored from the last year's crop. Then, some farmers in the hinterland who could not access the seeds of their choice were forced to switch to crops such as cotton and pulses. Normally, many farmers start procurement of seeds and other inputs about two to three weeks in advance of actual sowing. This year they delayed purchases due to the lockdown, which restricted movement at village and taluka levels. That's why we

KHARIF PRODUCTION IN THE LAST FEW YEARS

Crops	2015-16	2016-17	2017-18	2018-19	2019-20*
Foodgrain	128.69	128.07	125.09	138.33	142.47
Oilseeds	22.82	23.22	24.69	23.32	21.80
Total	151.51	151.29	149.78	161.65	164.27

* Provisional figures for 2019-20. Source: Ministry of Agriculture and Farmers Welfare, Government of India.

that has led to a sharp jump in the acreage of Kharif crops. Last year, in the first 15 days of June, around 15,260 acres were sown, while in 2019 it has jumped to 1.14 million acres with almost 77 per cent under one crop – cotton. Kharif transplantation will take a little more time to pick up in the region. Single-cropping Andhra Pradesh recorded a 3.4 per cent increase in the area of Kharif crops in 2019-20. Under the scheme, small and marginal farmers are entitled to get ₹50,000 in two tranches for two crops in a year. Landless farmers are also eligible for ₹25,000 per annum for three years. The government has not completed the scheme for the lockdown period. Some government funds to provide at least 50 per cent input subsidy to ensure smooth Kharif operations, said Bhaskar Choudhary, minister in charge. The state government has set up Kharif Bharat centres in each village to supply seeds and fertilisers, besides

Act on pulses now

Covid-19 is a time to think of increase acreage for pulses. This will help bring greater balance, especially considering the changing food basket of the country

RAM KAUNDINYA

Director General, FSII. Views are personal.

COVID-19 HAS BROUGHT into sharp focus the need to reorient our food basket. India's food basket is heavily skewed towards cereals, especially wheat and rice. It is time to think of increase acreage for pulses. This will help bring greater balance, especially considering the changing food basket of the country.

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vegetation, spices, and fodder have been better than 2018. However, experts said the state's food basket is heavily skewed towards cereals, especially wheat and rice. It is time to think of increase acreage for pulses. This will help bring greater balance, especially considering the changing food basket of the country.

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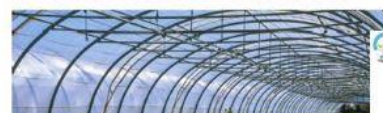
INDIA NEEDS OILSEEDS MISSION

WITH END-TO-END SINGLE WINDOW SYSTEM FOR ENTIRE VALUE CHAIN



The per capita annual consumption of oil in India is 18 kg and it is increasing. India is a net importer of oil. The government has set up a task force to study the oilseed sector. The task force has identified the need for an oilseeds mission. The mission will focus on increasing the production of oilseeds and improving the value chain. The mission will also focus on promoting the use of oilseeds in food and non-food products. The mission will be implemented through a single window system for the entire value chain. The mission will be implemented through a single window system for the entire value chain.

Rural entrepreneurs must... for Aatm Nirbhar Bharat



29 Improvement of plant architecture for sustainable agriculture. Dr Shivendra Bajaj, Executive Director, Federation of Seed Industry of India (FSII). Dr Ratna Kumria, Director-Biotechnology, Alliance for Agri innovation (AAI).

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Advocacy and Outreach-

FSII wrote to Chairperson PPVFRA seeking extension in filing of applications due to Covid-19 pandemic.

FSII wrote to Secretary Agriculture regarding FDI and seeking support for agricultural research. We also reached out regarding farmer's agreement on price assurance and farm services ordinance 2020.

AAI organized a video conference with RCGM regarding issues related to IBKP. We also requested CEO-FSSAI to look into the pending GM oil import applications.

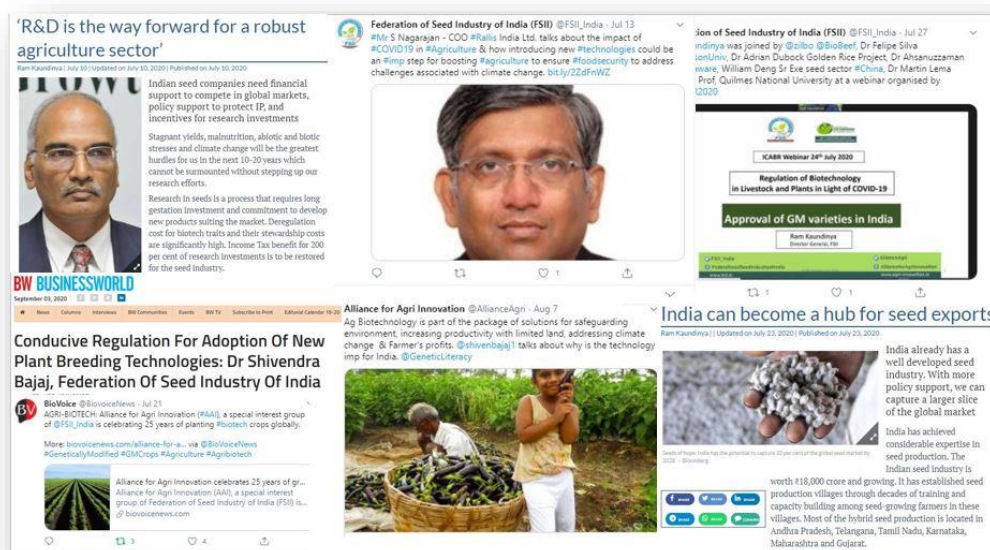
July 2020

The month was filled with interviews and articles of the leadership in the media. The topics that were covered – New business opportunities for Investors in Agriculture, Conducive regulation for adoption of new plant breeding technologies, GMO crops are safe and nutritious and India needs to feed its population, R&D is the way forward for a robust agriculture sector and India can become a hub for seed exports.

A press release was also issued from AAI to celebrates 25 years of growing GMO crops globally which was widely covered in the media. Apart from this, through social media, AAI has been posting positive stories around GM technologies on regular intervals. Resulting, the prestigious Genetic Literacy Project published Dr Shivendra Baja's article on GMOs safety and why India needs to adopt it.

Mr Ram Kaundinya was a speaker at the webinar conducted by International Consortium on Applied Bioeconomy (ICABR) on Regulation of Biotechnology in Livestock and Plants. A webinar on 'Do India's Agri-Reforms Unleash New Opportunities?' was moderated by Mr Ram Kaundinya.

In the interview section on 'Thoughts & Views'. FSII covered Mr S Nagarajan, COO, Rallis India Ltd.





Advocacy and Outreach-

FSII connected with Chairman NBA on legislative and operational issues related to the seed industry. We also wrote to JS- Seeds on various industry issues.

AAI was invited to 20th meeting of scientific panel on GMO & Foods, which was attended by CEO-FSSAI to present our case of pending oil import applications. The CEO agreed to request GEAC to take up the applications till FSSAI was ready with the GM food import regulations.

AAI also submitted recommendations to address the illegal planting of HTBT cotton to Secretary Agriculture.

August 2020

The month started with a press release urging Government of India and respective State Governments to allow Bt Brinjal Field Trials in India. It was widely covered in media – The Print, Agriculture Today, BioVoice, Agriculture Post, Dainik Bhaskar, Nav Bharat etc

Further, articles by leadership on Safety and regulation of GM crops in India, To Bt or Not to Bt – does this question persist anymore, Biologicals in Agriculture, Abrupt Ban of 4 Seed chemicals could spell doom and Transforming vegetable sector were published.

FSII also shared reaction on the Unsolicited seeds that were received through parcel in US and other countries. Our reaction was widely covered through The Times of India, The Financial Express, Deccan Herald, Business Today, NavBharat Times, Prabhat Khabar and Mr Kaundinya was interviewed by CNBC Awaz and CNBC TV 18.

In the section 'Thoughts & Views' FSII covered Dr S. Rajendra Prasad, Vice-Chancellor, University of Agricultural Sciences, Bangalore.

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Advocacy and Outreach-

FSII connected with government regarding the possibility of online submissions of applications to Central Variety Release Committee (CVRC).

AAI wrote in support of allowing trials to Union Minister for Agriculture, Agricultural Secretary, Chief Ministers and Agricultural secretaries of 8 states for which GEAC had granted Bt Brinjal trial approval.

AAI wrote to Chairman-FSSAI, CEO-FSSAI, Chairman CEBC, DG DGFT regarding the FSSAI order on requirements of Non-GM cum GM certificate accompanied with imported food consignments.

Gene editing focused social media outreach efforts are being made to create awareness regarding the technology, benefits, potential and regulation has been taken up.



<h2 style="text-align: center;">జీన్ ఎడిటింగ్తో రైతుకు మహర్షుని</h2> <p>పాకామాం తన ఆరిటింగ్ - కృషిని ప్రాత్సాధిత కరవా మాటె అక్ యూఢాత్మక ఉస్తక్షేప-</p> <p style="font-size: small;">(అంతర్జాతీయ అంశముల పేజీలో)</p> <h3 style="text-align: center;">Gene editing regulations in Asia-Pacific countries- Dr. Rishi Tyagi</h3> <p>New Delhi: Conventional plant breeding techniques have significantly increased crop productivity and yield. However, new approaches are required to further improve crop production in order to meet the growing global demand for food. Plant breeding will be increasingly beneficial by the innovative tool of gene editing which is, in fact, a new method of plant breeding wherein specific and pre-</p> <p>Bangkok, Thailand, said "Gene editing can help to improve farming, processing as well as traits preferred by consumers." Several crops grown in Asia-Pacific region like rice, wheat, cotton, banana and cassava etc., with improved traits like disease resistance and insect tolerance, developed by gene editing and soon will be ready for the farmers' fields. The success and potential of this technique to</p>  <p style="font-size: x-small;">డా. రిషి ట్యాగి ఆసియా-పసిఫిక్ జీన్ ఎడిటింగ్ నిపుణుడు</p>	<h2 style="text-align: center;">Gene Editing in Crops – A Strategic Intervention in Boosting Agriculture - Dr. Ravi Khetarpal</h2> <p>Ahmedabad: Plant breeding is the backbone of modern agriculture and has contributed towards crops improvement since the advent of agriculture. The goals of crop improvement have evolved over the period of time and plant breeders have utilised the available information and tools to deliver improved varieties. Breeders today face multifaceted challenges, including enhanced nutrient</p>  <p style="font-size: x-small;">డా. రావి ఖేతార్పల్ ఆసియా-పసిఫిక్ జీన్ ఎడిటింగ్ నిపుణుడు</p> <p>Dr. Ravi Khetarpal is the Executive Secretary of Asia Pacific Association of Agricultural Research Institutions (AAPARI) based at Bangkok, said, Gene editing is the latest breeding tool that enables the breeder to make precise changes in genes for improved traits. Multiple back crossing and laborious selection has been a norm in plant breeding, even when mutagenesis and molecular tools are used to</p>
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Seed Connect – FSII Newsletter



Agri Innovation Post – AAI Newsletter

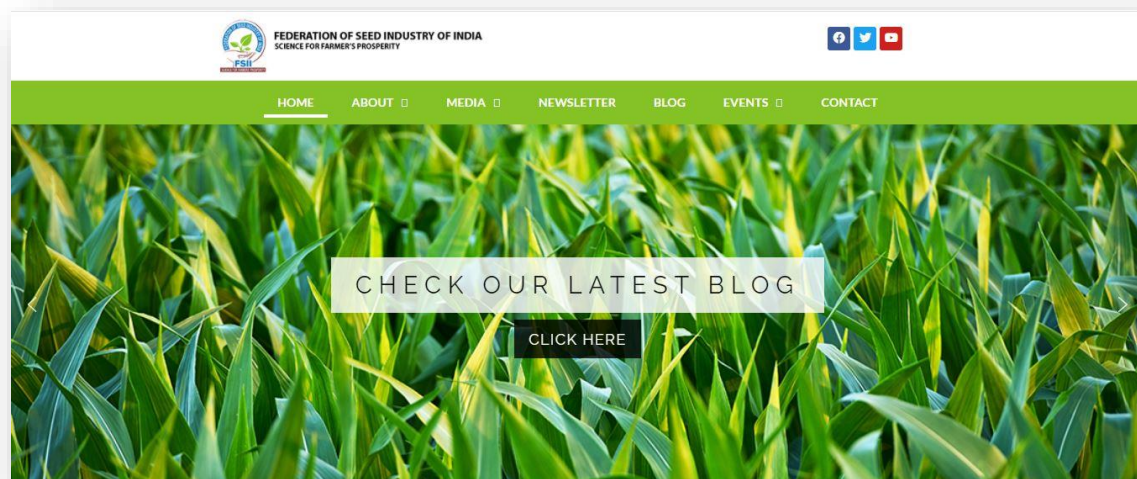


Additional Activities

CSR Booklet



Website Development



Video Development – Plant Breeding Innovation

AAI collaborated with ASTA to develop Plant breeding Innovations videos for the Indian audience in multiple languages (English, Hindi, Marathi and Telugu). These were posted on our YouTube channel.

<https://www.youtube.com/watch?v=q9jvkxygdxM&t=52s>



FSII Video development – Understanding GMOs