A STUDY ON IMPACT FARM BILLS ON FARMERS AND AGRI-TECH STARTUPS IN INDIA.

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Abstract:
A study is conducted to understand the impact of the Farm bills on the farmers as well as the Agritech Start-ups. This study is focused on the three farm bills and providing an insight about them and analysing their benefits to the farmers as well as the Agritech Start-ups in India.
The major focus of the study was to understand the reasons behind the unrest amongst the farmers. The study also analyses the previous rules and regulations and compares the new bills with the old ones to understand the benefits in detail. The study was conducted using the secondary media sources and was completely based on data points from Internet and news medias.
The new Farm Bills potentially aim to provide small farmers more opportunities to boost their moral. These bills would have good impact on the Agritech industry and various start-ups have already come ahead and hailed this decision of the Government. On the other hand, the large farmers from Haryana and Punjab were found to be upset because of the new bills causing a huge chaos. There found to be disparity amongst the views of farmers. Many of the farmers has less idea about what the bill are about.
The study also explains the roles of Agents and APMC markets and in the current situation and how these roles could change after implementation of the bills. The bills aim to provide more opportunities to the small farmers and would help in maintaining order by controlling prices of the commodities.
Key Words: Farm Bills, APAC Market, Agritech, farm prices, commodities

Introduction

On 5th June 2020, in the midst of increasing alarm about the seismic deterioration of the economy and the spread of the Covid-19 pandemic, three agricultural marketing ordinances were enacted by the Government of India which constituted a fundamental reorientation of the current regulatory system. In doing so, without the clear participation of the state governments, the central government showed its ability to use the Covid-19 crisis and the ordinance path to drive through reforms unilaterally.
These ordinances were introduced to Parliament as parliamentary bills for' discussion' and ratification by September 14, 2020, and have since been approved. Unfortunately, Parliament's hearings were vastly ineffective to illustrate the possible repercussions of the bills and to fix their several weaknesses. The government also did not use the parliamentary debate as an occasion to expose and justify its broader vision for Indian agriculture that these bills highlighted. The bills received presidential assent on 27 September and were notified in the gazette.
One bill relaxes the limits on the purchase and selling of agricultural goods, the other relaxes the stocking restrictions under the 1955 Important Commodities Act (ECA), and the third implements a new law to authorize contract farming based on signed agreements.
The researcher has tried to outline the context of these momentous changes and identify the main characteristics of these bills. Even for those who endorse agricultural marketing reforms, it

evokes great fear. Marketing changes, specifically those involving deregulation and the removal of the state, must inevitably be put in a wider sense of state involvement and, as such, a better articulation of the expected policy direction must be required, in particular with regard to current state funding. This is particularly important because at a time when most of the developing world is re- evaluating the viability of its agri-food supply chains, India, as a smallholder country is doing the opposite.

Marketing of Agriculture produce in India

Agricultural sector change in India has traditionally been a vexatious problem. In the Constitution, "agriculture", markets and fairs and trade and trade within the state are all subjectsof the state Entry 14, 26, 28, List II, Seventh Schedule. Accordingly, the responsibility of the States was the agricultural markets. At the same time, by Article 301, the Centre has an overriding obligation to ensure that free trade occurs within the country: to ensure freedom oftrade, trade and intercourse.

Under the Agricultural Produce Marketing Committee (APMC) Acts, state-specific legislation thus governs agricultural trade between states. These usually mandate the purchase of some 'notified' agricultural commodities with the payment of specified commissions and marketing fees from government-regulated markets. Usually, dealers and intermediaries' agents of the Commission need a licence to work under these mandates. They are mandi-specific licences issued by the APMC in several jurisdictions. In the 1960s, all of these acts were adopted to guarantee that farmers had access to organised markets.

While the APMC Act was intended to protect the interests of farmers, it perversely made farmers dependent, all rolled into one, on middlemen, who were financiers, knowledge brokers and traders. Middlemen play a crucial position that has been considered impossible by traditional organisations to substitute or dislodge. Agents and merchants are not always mercenaries and trading is actually auctioned or tendered to the highest bidder in closed bids on the APMC markets. But the nexus between merchants and commission agents continues to hold competition out and therefore leaves no bargaining room for the farmer.

Road Map for Implementation

The Three Bills

One aspect of agricultural marketing is dealt with in each of the three bills. Collectively, they are built to reduce obstacles faced by different players in the agri-food supply chain in communicating with farmers. They intend to achieve this by reducing dependency on existing intermediaries based on APMC and establishing a single national market 'one nation-one market'. Despite the titles of the bills emphasising 'farmers', all three bills rely overwhelmingly on supply chain players to take advantage of the new rules and share their profits with farmers instead of relying specifically on farmers' welfare.

The Farmers' Produce Exchange and Commerce Promotion and Facilitation Bill, 2020 is considered the first, and perhaps the most far-reaching and contentious. This bill aims to circumvent the APMC Operates at the state level and can thus be referred to as the 'APMC Bypass Bill'.1 This bill restricts the oversight and authority of APMC to the' business yard 'of APMC. Outside the business yard, individuals in what can be referred to as the 'trade area' are free to trade in agricultural goods. Therefore, a trading region is where trade takes place and is not currently regulated by APMC (Section I.2.m). Transactions in the business region are free of the

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requirement to pay a charge to the APMC and purchasers do not need licenses.

The second bill, Essential Commodities (Amendment) Bill, 2020, aims to eradicate the arbitrariness and unpredictability of stocking limits notice. The bill indicates that stocking caps for horticultural produce should only be invoked if the market price rises by 100 percent. The retail price in the previous 12 months or the average retail price in the last five years, whichever is lower, will be the base price.

The third order, the Price Assurance and Farm Services Bill 2020 Farmers Empowerment and Protection Agreement, is more conveniently referred to as the 'Contract Farming Bill' and seeks to provide a basis for written agreements without mandating them between farmers and sponsors. It enables' sponsors,' whether they want to use those contracts, to communicate with farmers by written contracts. The contract farming law has a longer tradition of comprehensive negotiations with stakeholders, unlike the APMC Bypass measure.

Literature Review:

Mahendra Dev. (2021). Concluded that parliament's farm law is in the right direction. Farmers have more options and will be able to find better rates. But, to understand the potential, there are plenty of uncertainties. Further accountability, communication and clarification are required for farmers, particularly smallholders, to profit from the reforms. Government policies on cereals, particularly rice and wheat, have been biased. A change from rice, wheat-centric policies to non-cereal-focused policies is needed.

Subhendu Bhattacharya. (2021). Concluded that agricultural modernisation and a second wave of the green revolution are required. In agricultural practises, he says, new legislation could usher in autonomy. He adds that change will not take place through populist steps, wilful propaganda and the waiver of farm loans. It's time to differentiate, he claims, between pro- market and pro-business views. Instead of remaining aligned to the local Mandi, farmers can seek other state or nation-wide markets. Sticking to the plentiful supply of rice and wheat that sits unused in government warehouses and is consumed makes little sense.

C. Ganeshkumar (2021). The aim of the study was to present the mapping of Agritech companies operating in the Indian agricultural value chain. He states that Agritech companies are operating or serving the 'storage and trading' and 'distribution and retail.

Sankar, V. (2020). Believes that social justice and environmental protection have significant consequences for them. In India, agricultural laws have led to widespread and robust protests across the country. The laws are a culmination of efforts to commodify food and farming practises through capitalist economies and governments, says the study. It claims that the emerging peasant rebellion can be viewed as part of a broader campaign for environmental justice. By revisiting the ontological issues about what constitutes food and agriculture, the analysis attempts to cross-question the food problem and the peasant question. It takes into account the current discourse and the old vision of 'food as normal' and finds that in the context of counter-movements by the peasantry, the laws face active opposition.

Kaveri. (2020). Explored the three new agricultural bills signed into law evoked demonstrations, but unevenly, by farmers in many parts of the country. The chaos was most severe in states whose farmers have benefited from the purchase of wheat and rice by the Food Corporation of India at the minimum support price over the years.

Neelmadhab Padhy. (2019). Proposed a model that will predict what the environmental condition for healthy productivity should be for a real-time climate, which crop will benefit from production and for any specific region. In the seasonal trend case, this is achieved by using a machine learning algorithm with predictive analysis and applying a pattern recognition technique to discover cropping trends and analyse them.

Govardhana, G. (2018). Developed an Agritech model that deals primarily with the agricultural aspects of Karnataka. Which really helps farmers and other users to the full. In the single platform type, information seekers may obtain the knowledge that makes users feel more secure. Including the numerous fields such as seeds, crops, soil knowledge, pesticides, machinery, fertilisers and modern touch to alter the old era of agriculture to benefit financially and become more useful from limited natural sources such as water and soil, etc

Understanding the Farm bills and the potential they carry for the farmers as well as the AgritechStart-ups.

Table 1.

Act	Provision	Opposition
Farmer's Produce Trade .and Commerce (Promotion and Facilitation) Act, 2020	- To create an environment in which farmers and traders can freely sell and buy farm produce outside of registered mandis in states with APMCs. - To encourage the free inter-state and intra-state trade of agricultural products.	- This could spell the end of the MSP-based procurement process. - The act could jeopardise the livelihoods of commission agents/Athatiyas, who make up a significant portion of the current agriculture sector.
The Farmer (Empowerment and Protection) Agreement of Price, Assurance and Farm Services Act, .2D2D	- Farmers could enter into a contract with Agro firms, wholesalers, exporters, or Large retailers for the selling the farm produce at a pre-determined price. - The conciliation board, Sub-Divisional Magistrate, and Appellate Authority provide a three-tiered dispute resolution system.	- This might lead to the entry of large corporations into Indian agriculture, reducing farmers' bargaining power. - Farmers and traders economic well-being could be put in the hands of civil servants rather than the courts.
The Essential Commodities (Amendment) Act, 2020	- Cereals, pulses, oil seeds, onions, and potatoes will be removed from the list of important commodities. - It eliminates stockholding restrictions on the above-mentioned products, except in exceptional circumstances such as war or famine.	-This might lead to large buyers stockpiling produce. - This will allow the buyer to control the price of the produce throughout the process. The price caps for exceptional cases are so high that they are rarely utilized.

Table 2

Act	Potential benefits for Agritech
Farmer's Produce Trade and Commerce (promotion and Facilitation) Act 2020	Bypassing through the time-consuming permitting process To buy from producers, start-ups would not need to apply for a trader's permit. The time-consuming and cumbersome method of obtaining several permits would be simplified.
	Operational scalability and cross-state processes The Act also allows for the freedom of movement of farm produce between states, which will aid start-ups in expanding their operations. Given the diversity of rules and regulations across states, scalability is currently a major challenge for any Agritech Start-up.
The Farmer (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, 2020	Price determination and the elimination of unnecessary intermediaries The Act encourages contract farming and eliminates stock-keeping restrictions. This will aid start-ups in deciding commodity pricing and eliminate unnecessary intermediaries from the system.
	Prioritizing Farm Infrastructure The elimination of the stock cap would make it easier to build farm facilities such as warehouses and processing plants, which will help to reduce post-harvest losses.
Amendment to the Essential Commodities Act of 2020	Improving the Supply Chain for Critical Crops Removing commodities such as cereals, pulses, oilseeds, onion, and potatoes from the list of necessities would promote start-ups to enter the commodity trading market, allowing them to improve their supply chain.

Fig 1.

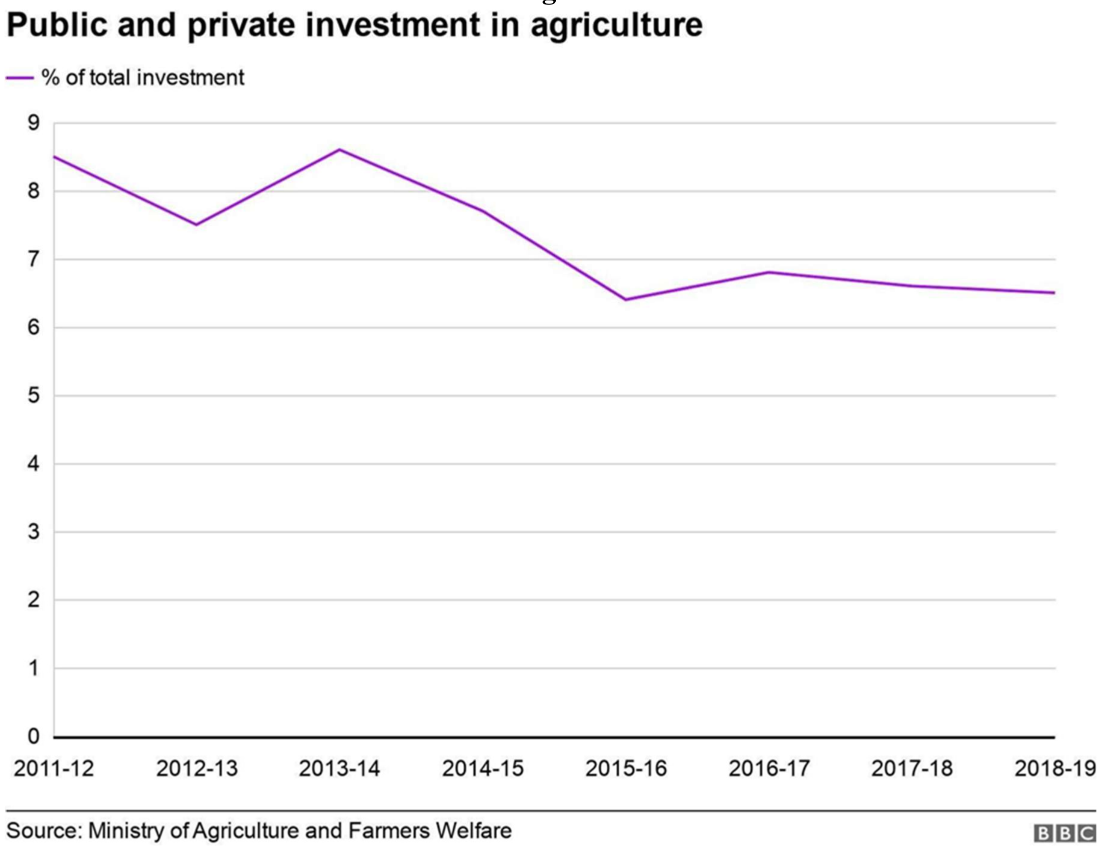

Figure 1: Public and Private Investment in Agriculture.

The above data was sourced from the Ministry of Agriculture and Farmers Welfare. It shows that the investment done by the public and private sectors in the agriculture from 2011-12 to 2018-19. There is a significant decrease in the public private investment since the 2012 but there was a rise in the investment on 2013-14 which was followed by a significant decrease and then the trend continues to be declining.

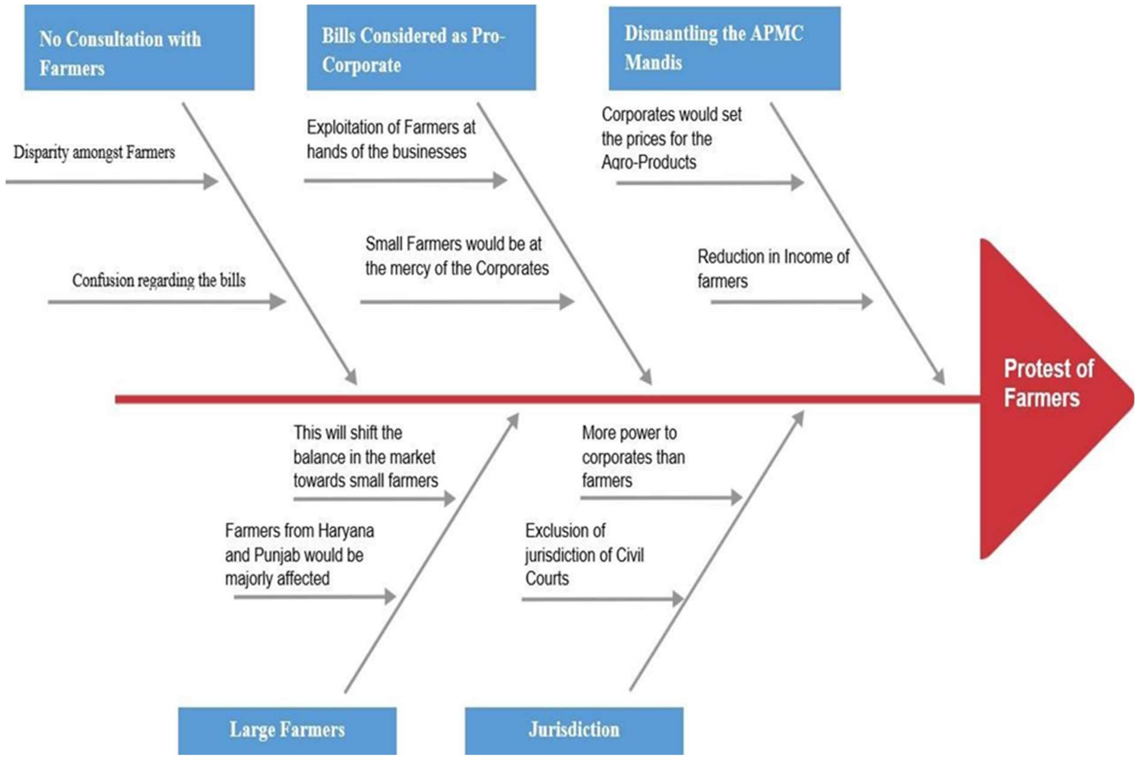

Figure 2: Fishbone Diagram

Interpretation:

One of the main reasons for the farmers protests which has caused disruption in the food supply chain were the Large Farmers from majorly from Haryana and Punjab being affected as the monopoly of deciding the prices of various agricultural products would shift from them to the government creating a shift of balance towards small farmers.

The Civil courts being excluded from the power of jurisdiction with regards to the farm laws which in turn would work as a motivation factor for the companies to take advantage of the farmers in their adversities.

There was no Consent of farmers taken in consideration by the government while taking the decision for the bills. This caused the disparity amongst the farmers and this led to confusions and more chaos.

The bills focus on disrupting the monopoly in the market and create space for small farmers and allow them with freedom to sell their produce all over the country and to whomever they wish. This has caused fear amongst the farmers that the small farmers can be exploited by the companies and that they would be at the mercy of the corporates.

Impact of the farm bills on the Agri-tech Start-ups

The Indian government passed two of three bills in Parliament on September 20, 2020, focusing on providing farmers with nationwide market access, storing/hoarding of agricultural commodities, and contract farming. The farmer bills aren't ideal, but they're a step in the right direction, particularly at a time when the economy's turnaround is heavily reliant on the agricultural sector, according to Milk Mantra's creator. MeraKisan CEO advised the start-ups to give additional value to farmers so that they are not only self-sufficient, but also have alternate sources of revenue.

Though India's recent agriculture reform bills have sparked much debate and agitation from

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farmers across the country, there is undeniably reason to believe that the market would open up and increase agriculture income at the farm level. Even though the bills - the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Bill, and the Essential Commodities (Amendment) Bill - are awaiting the President's final approval, there are questions about whether they can improve market access for farmers and whether they will address the problem of opportunism.

Farmers will supply directly to firms under the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, as long as they meet the requisite quality requirements and reliability. And Agritech and food supply chain start-ups see this bill as a means to expand their global reach and revamp their business models. The farmer bills may not be flawless, according to Srikumar Misra, founder of dairy-based agri food venture Milk Mantra, but they are a welcome move nonetheless, particularly at a time when the economy is largely dependent on the Agri sector to lead the revival.

Other start-ups saw promising results from the innovations as well, but warned against cheering the bill until its effect on the ground was known. "It's important to remember that the target is not to shut down APMCs, but to extend a farmer's options," said Ashok Prasad, cofounder of Unnati, an Agri-fintech platform that aims to mitigate farming risks for small and marginal farmers in India. Furthermore, Puneet Sethi, cofounder of Farmpal, an Agritech start-ups that connects farmers with businesses, said that the reforms are urgently needed and are likely the most important step in helping farmers raise their incomes. He went on to claim that this would help small farmers with marginal land holdings (1 to 5 hectares), who make up over 75 percent of India's farmers.

Small farmers are usually more troubled than larger farmers because they have fewer market access, a reduced capacity to purchase agri inputs (such as seeds, fertiliser, pesticides, and mechanisation), and lower yields, both of which restrict their market leverage. These considerations are exacerbated by the fact that in terms of sale price, you don't have the same clout in the nearby APMC or conventional markets. In most situations, their wealth isjeopardised, trapping them in a debt loop.

That is the new truth for the majority of Indian farmers. Eliminating the Middleman:

Industry experts have mentioned that Indian farmers have faced the same difficulties for decades; but, while there have been many policies and schemes in the past, these have only served to assist farmers in the aftermath of their problems rather than solve the root causes of their problems. The bills have been hailed as a step forward in 'freeing' farmers to make their own decisions in a free market and more open mechanism.

Grey Areas in the Agri-bills

Although the majority of the start-ups founders and business analysts we talked with have an optimistic view on the Agri farm bills, few agree that logistical problems will arise in the near term. Such difficulties include farmer understanding and knowledge of the bills, as well as the effects and impacts on farm activities.

Still a grey area that could need close government oversight so that farmers can trust private companies to have equal prices and, at the very least, accountability,avoiding the creation of "more middlemen" in a process where farmers have already been abused for decades.

1. Start-ups focusing on small farmers.

Small and marginal farmers are anticipated to profit the most from the bill, since they formerly had no input in how their product was sold. In principle, smaller producers can get decent prices for their produce by cutting marketing and transportation costs. Vihari Kanukollu, cofounder and CEO of Hyderabad-based hydroponics start-ups UrbanKisaan, claims that farming efficiency will improve dramatically. Farmers will be able to find crops of higher demand and profit margins because they will be able to negotiate directly with consumers. "For partner's produce, there will be a lot of competition, and the value will be directly passed to farmers,"

2. Start-ups with a focus on agriculture have new opportunities:

Agritech start-ups like MeraKisan, Unnati, Farmpal, UrbanKisaan, Agrowave, INI Farms, Milk Mantra, and Agri10x are still collaborating with farmers on the field, and any aspects of the Agri reform bills will not change that. However, larger Agri start-ups, especially those in the post-harvest supply chain - such as those engaged in agri marketing or delivering cold chains or storage solutions - now face less regulatory enforcement and have less processes to meet when dealing with farmers.

According to industry experts, transacting with farmers used to be confined to state borders, but now start-ups can locate and work with farmers from all over India. In this way, more outreach by these companies and expanded farmer contacts would favour farmers by growing their awareness of opportunities in the short term and offering long-term income growth support.

Furthermore, it is predicted that the private sector will become more interested in and invest in the agribusiness, especially as contract farming becomes more widespread. Agritech models relating to Agri marketplaces (for produce, inputs, and equipment), farm mechanisation, cold chain and storage solutions, farm advisory, legalities and contracts, predictive analytics for pricing and product, farm-to-fork supply, tech-enabled logistics, and supply chain optimisation will all see increased growth.

Moreover, industry analysts predicted that players with large pockets, such as Cargill, Kroger, Walmart, Costco, and Reliance Retail, will aim to support their market operations by investing in cold chain storage systems and logistics centres, as well as finding and linking up high volume producing farmers for first access to produce and more.

In view of technological developments, Milk Mantra's Misra, who is part of the NITI Aayog team working on a possible Agritech stack for India, said that data structuring and ways to use it can play a revolutionary role in the industry, and that there are main areas like blockchain, AI-driven supply management, farmer information systems, and others where startups can make a real difference.

Conclusion

The three bills amended by the government which saw the unrest amongst the farmers focused on crossing the APMC mandis and giving farmers a go ahead to sell their produce on the National markets. This allowed small farmers to enter into new territories to sell their produce and also allowed the intervention of corporate giants to enter the Agro-industry. These bills have some drawbacks by which the farmer’s sentiments have been hit.

The study was based on the currently progressing topic. Thus, the data points were minimal and were focused on the particular views. This farmer’s bill has its own benefits in terms of creating a forward moving impact on the Indian Economy and help the Agricultural Sector to grow in terms of revenue as well as technology and give more income to the farmers while improving the status of the small-scale farmers. The APMC system was liked by many major farmers from

Haryana and Punjab also there was a country wide support from other farmer association as well. The mapping of the bill and the action plan was at fault as reported by many farmers. The major outrage was seen regarding the large farmers and the disputes raised chaos causing disparity amongst the farmers and giving rise to a much larger chaos.

In case of the Agritech Start-ups, the CEOs of various start-ups have positive views about the bills and have spoken in support of it. These bills will help in improving the Agricultural technology in India and also provide Agritech with a opportunity to spear head the progress. The emphasis of the Agri-techs would be to incorporate latest technology in advancement of the farmers and give them benefits. The small farmers or the farmers in famine prone regions would be majorly benefited.

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