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Removing Shackles: Freeing up the Indian Agriculture

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Introduction

A majority of the Indian population depends directly or indirectly on agriculture for employment opportunities vis a vis any other sector. More than 65 per cent of rural households depend primarily on agriculture for their livelihood, out which more than 80 per cent are small and marginal farmers. Therefore, any constructive agricultural reform will also contribute to poverty alleviation a large section of population. Agrarian reforms have resulted in poverty alleviation across the developing world (Cervantes-Godoy & Dewbre, 2010). The World Development Report -2008 noted, “GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture” (World Bank, 2007).

Although the share of agriculture in national income is relatively low (14 per cent), it is highly unlikely that it will fall below 10 per cent in the next twenty years. Agriculture and its allied sectors continue to remain significant in the Indian economy because of continued role in employment, income and most importantly, in national food security. The objective of doubling farmer’s income requires challenges of the sector, such as access to credit, insurance coverage, irrigation facilities, etc. to be addressed on a priority basis. To add to this list, there is also the issue of the shrinking size of farms.

According to the Agricultural Census, 2015-16, the average size of farm holdings declined from 2.3 hectares in 1970-71 to 1.08 hectares in 2015-16 (Agriculture Census Division, 2019). For the marginal farmers, the average landholding was reduced to just to a mere 0.38 hectares in 2015-16. Small and marginal farmers are the backbone of Indian agriculture as 80% of Indian farmers fall in this category (Dev, 2012).

Unfortunately, although the structural reforms were initiated in India in the year 1991, Indian agriculture was deprived of the benefit of these reforms. When compared with the immediate pre-liberalisation period (1980-83 to 1990-93), agricultural growth in India recorded a visible deceleration during the post-liberalisation period (1990-93 to 2003-06) (Bhalla & Singh, 2009). Agriculture's contribution to the national income has steadily declined from 18.2 per cent in 2014-15 to 16.5 in 2019-20.

Another critical impediment to agricultural growth is the barriers to internal trade, which was also flagged by the National Commission of Farmers (2006). The Commission also goes on to say that the "acts like the Essential Commodities Act, 1955, and the plethora of control orders issued under it, make internal trade difficult and markets fragmented". Additionally, the Commission recommended reviewing the APMC Act to meet the requirements of modern agriculture and attracting private capital in this sector. As the APMC

Acts and their implementation differ from state to state, the transactions costs rise owing to uncertainties in the supply chain (OECD/ICRIER, 2018).

Sharad Joshi, the leader of Shetkari Sanghatana, often said that the internal terms of trade discriminated against farmers, who were not allowed to export and had to operate under tight controls in the domestic market (Livemint, 2018). Many states had already made their APMC Acts flexible to attract private investments in the agricultural sector (Dev, 2012; Malik, 2016).

The Farmer's Produce Trade and Commerce (Promotion and Facilitation) Act 2020, Farmer (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, 2020 and the Essential Commodities (Amendment) Act, 2020 will usher in the 1991 moment for the agri-business sector. These reforms will prove to be a win-win situation for farmers, buyers and consumers. They will help in freeing up agriculture and provide freedom and choice to farmers to sell their produce outside the Mandis. At the same time, they will also enable the buyers to procure the crop from across the country, thus creating competition in agricultural marketing. As a result of this competition, the value chains will become more efficient. The marketing costs will decrease, which in turn will help in increasing the farmer's income.

The three legal provisions collectively will also make the farmer independent of government-controlled markets and fetch them a better price for their produce. The aim is to facilitate trade outside the Mandis too, although Mandis will still operate. This also encourages intra-state trade, which will also reduce the cost of transportation.

The amended regulations aim to enable farmer's access to modern technology by engaging with private sector agri-business companies, retailers, exporters for service and sale of produce. It also seeks to benefit the small and marginal farmers with less than five hectares of land. The Essential Commodities (Amendment) Act 2020 further removes items such as certain cereals, pulses, oilseeds; onions and potatoes form the list of essential commodities. This will help in attracting FDI in Indian agricultural sector.

Against this backdrop, in the following sections, we try to explore who is a farmer, the controls which have riddled Indian agriculture since long and the benefits of the recent reforms.

Who is a farmer: Is it mandatory for a farmer to own land?

Farmers in some states, especially Haryana and Punjab, have been vehemently opposing the recent agricultural reforms. A lot of this opposition can be attributed to information asymmetry as there have been claims by certain pressure groups that government would be discontinuing MSP and the reforms will be detrimental for the farmers. The Prime Minister and the Agriculture Minister have both categorically stated that the government is not going to discontinue procurement at MSP (Sharma, 2020; The Hindu, 2020).

Furthermore, are the farmers (those opposing the reforms) landowners or are they landless labourers? Is there any standard definition of the farmer in the country? How many such farmers are there in the country? These are some of the things which need to be probed.

A lower bound figure of farmers in India can be ascertained by the number of farmers enrolled under the Prime Mantri Kisan Samman Nidhi (PM-Kisan). Launched in December 2019, the scheme provides direct cash transfers to all the small and marginal landholder farmer families who collectively own cultivable land of up to 2 hectares as per land records of concerned state/UTs. Thus, registration of farmers in the scheme is contingent on land ownership. Several landholder farmers are also excluded from the scheme. These exclusions include former and present constitutional posts holders, former and current ministers/state ministers and former/ present members of Lok Sabha/ Rajya Sabha/State Legislative Assemblies/State Legislative Councils, former and present mayors of municipal corporations and former and current chairpersons of district panchayats and all persons who paid income tax in the previous assessment year. The farmers are required to do self-registration with penalties for false declarations. More than 111 million farmers are registered under the scheme.

Then there is the agricultural census, which is carried out every five years. The last agricultural census happened in 2015-16. Under this, there were 146.45 million 'operational' holdings. The highest number of operational holdings were in the following states: Uttar Pradesh (23.82 million) followed by Bihar (16.41 million), Maharashtra (15.29 million), Madhya Pradesh (10.00 million), Karnataka (8.68 million), Andhra Pradesh (8.52 million). We can reasonably conclude that this figure must have increased further due to the fragmentation of landholdings since 2015-16. But again, in case of the agriculture census too, the thrust is on the land ownership.

The definition of farmers, in this case too, is contingent on the ownership of the land.

Despite a relatively simple definition of the farmers, not all landholder farmers are classified as farmers in the official records. This is due to the defective surveys, settlements and non-recording of possession. As agriculture is a state subject, the process of ascertaining who owns agricultural land is carried out by the various state governments. Thus, it is imperative to critically analyze the quality of land records as land is prerequisite to defining who a farmer is. The Committee on State Agrarian Relations and Unfinished Tasks in Land Reforms (2009) noted "the last extensive survey and settlement in India was conducted two to three decades prior to independence" (Department of Land Resources, 2009, p. 134). This means that there are states where the cadastral surveys were done in the 1910s and 1920s. Surprisingly, state governments are still relying on pre-independence data. It does not make sense to rely on more than a century old data for formulating policies in 2020. Although many pressure groups are vehemently opposing the recent agricultural reforms, nobody is questioning the states for not updating their land records.

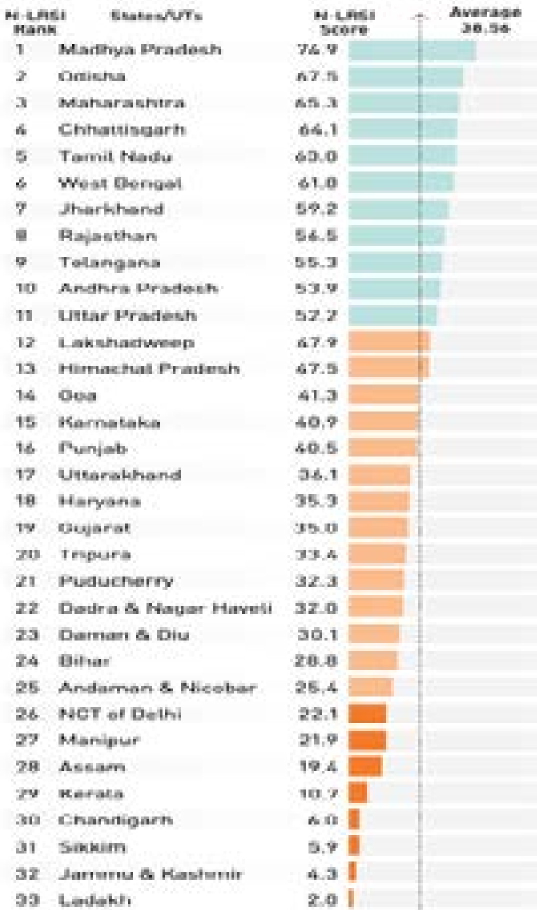
Moreover, the quality of land records varies from a state to state. In 2017, the West Bengal Government abolished the land revenue. It means that the state will never be able to ascertain who the farmer is after the year 2017 if the definition of a farmer is just contingent on ownership of land. As the definition of farmers is contingent on owning land, it will be challenging to determine who a farmer is in the state of West Bengal post 2017.

In 2018-19, the Government of India launched the Digital India Land Records Modernization Program (DILRMP), a centrally sponsored scheme since 2018-19 on modernising land records. Based on the DILRMP database, NCAER ranked states on the quality of land records. In 2020 rankings, leading states on the Land Records and Services index were states Madhya Pradesh, Odisha and Maharashtra. The leading states of the green revolution, Punjab and Haryana were ranked 16th and 18th, respectively on the NCAER's Land Records and Services Index (NCAER, 2020).

The Committee on State Agrarian Relations and Unfinished Tasks in Land Reforms (2009) had recommended for carrying out periodic surveys/resurveys. The periodic updating of land records is critical as land is a dynamic entity. The ownership extent, boundaries and classification of land keeps on changing, and unless the records are updated periodically, the land records become obsolete. This issue has also been highlighted by the Koneru Ranga Rao Committee in Andhra Pradesh.

Despite these recommendations, DLRMP dashboard suggests that surveys and resurveys have been completed only in 11.5% of the Indian Villages. Surprisingly, no such surveys have been done in the state of Punjab according to the Dashboard.

Fig 2.1: Ranking of states on the NCAER Land Record Services Index



Source: NCAER (2020)

This begs the question that voices of which farmers are more important? Whose voices should the government hear? Which farmers should the government be looking at to bring in reforms? Should it be on the basis of land ownership? If yes, should we listen to the farmers with large landholdings or small landholders? The largest agricultural area is in the states of Rajasthan, Maharashtra, UP and MP (Department of Land Resources, 2009). Should the government listen to them? The most significant number of holdings are in Uttar Pradesh, Bihar, Maharashtra and Madhya Pradesh. Are their voices critical? 86% are small farmers with less than 2 hectares of land. Does it make sense to ignore the 86% smallholder farmers and listen to only the farmers of Punjab and Haryana who individually own more than 10 hectares of land on an average, totaling up to 0.6% of the land?

Thus, there is an immediate need to have a uniform definition of a farmer. Many individuals earn their living by cultivating land but do not necessarily own the land. Unfortunately, due to their circumstances, small, marginal and landless farmers sell their produce at a price which is well below the announced MSPs (Mundle, 2017). At the same time, they are virtually forced to buy their inputs at high prices as they are not classified as farmers. Aren't they the critical stakeholders in the agrarian reforms? Often, the interests of the two categories can be diametrically opposite.

For instance, if agricultural wages go up, it will be suitable for the labourers, but for the landholders, it will drive up the input costs. It squeezes the profitability of the landholder.

The definition of 'farmers' in The Protection of Plant Varieties and Farmers' Rights Act, 2001 is not contingent on owning land. According to the Act, a "farmer means any person who— (i) cultivates crops by cultivating the land himself; or (ii) cultivates crops by directly supervising the cultivation of land through any other person; or (iii) conserves and preserves, severally or jointly, with any person any wild species or traditional varieties or adds value to such wild species or traditional varieties through selection and identification of their useful properties".

National Commission on Farmers (2007) gave even more comprehensive definition of farmers, which never got implemented completely. The Commission noted that the definition of the farmers should be broadened to include those who do not own agricultural land.

> *"For the purpose of this policy, the term 'FARMER' will refer to a person actively engaged in the economic and/ or livelihood activity of growing crops and producing other primary agricultural commodities and will include all agricultural operational holders, cultivators, agricultural labourers, sharecroppers, tenants, poultry and livestock*

rearers, fishers, beekeepers, gardeners, pastoralists, non-corporate planters and planting labourers, as well as persons engaged in various farming-related occupations such as sericulture, vermiculture and agro-forestry. The term will also include tribal families/persons engaged in shifting cultivation, and in the collection, use and sale of minor and non-timber forest produce".

- National Commission on Farmers, 2007

However, currently, the definition of farmers is contingent on owning lands. One would like to understand why owning land is a prerequisite for a cultivator to be classified as a 'farmer' by the state. A simple definition makes it easier for the administration in identifying the farmers. Although the definition is not all-encompassing, it does help in identifying a considerable number of farmers for public policy purposes. Policymakers often try to simplify the complex reality to make the process of 'governing' easy. Scott (1998) suggests that state simplifications are basic givens in modern-day statecraft. According to Stimson (2000), 'legibility' which is the need of the state to map its terrain and people is an important characteristic of statecraft. Scott (1998) suggests that officials in the modern state often ignore several steps while governing society. They use a series of 'typifications' for assessing the life of their society. However, these typifications are an abstraction of reality. It enables the officials to comprehend the complex reality through schematic categories. Scott (1998), through the example of foresters, explains how they do not capture the full diversity of the forest as it doesn't serve their purpose. Thus, this leads to a misleading representation in the form of simplified approximation which serves their interests. Efforts to make society more legible by officials are like "abridged maps" intended to represent "only that slice of it that interested the official observer" (Scott, 1998, p. 3). The simplifications such as maps, censuses, standard units of measurements etc. are the techniques which help the officials to grasp the complex reality. To grasp this complex reality, which is consequently used for policy formulation, the reality is reduced to the "schematic categories". Although this exercise gives an insight into the society, however, this knowledge often opaque. This knowledge makes it relatively more manageable for the officials to govern.

On similar lines, it makes it easier for the administrators to follow a more straightforward definition of farmers which is just contingent on landholding. A comprehensive definition brings even a broader set of complexities.

However, the time is right for all the stakeholders, including the central and state governments to arrive at an all-encompassing definition of farmers. This would allow all farmers, including the landless labourers, to get enrolled in various government schemes. Landless labourers, who genuinely require support from government are not able to access various benefits extended by the government. It is the large landowners who actually get benefitted out of the schemes which are primarily aimed to provide respite to the smallholder and landless farmers.

Agriculture in India: Riddled with Controls

Although the LPG reforms of 1991 brought in a sea change in the Indian economy, agriculture was one of the sectors which didn't undergo any conclusive reforms in during the 1990s. As Sharad Joshi used to put it, reforms are about choice, competition and efficiency. Agriculture in India has been left without these three basic principles of reforms. Until recently, the farmers did not have the agency to exercise their choice. Inputs, production, stocks, distribution and marketing were all controlled. The APMC act deterred farmers from exercising their choice and selling their produce for better remunerative price outside the government controlled Mandis. The procurement policy forced the farmers to stick with paddy and wheat. The regressive regulations in the form of the Essential

Commodities Act restricted private investments in agricultural and agro-processing infrastructure.

Non-price or structural factors on supply-side such as shrinking farm size, low capital formation and non-availability of credit have led to slower agricultural growth since the 1991 reforms (Balakrishnan, Golait, & Kumar, 2008). The agriculture couldn't derive expected benefits out of the macroeconomic reforms because the reforms directly affecting agriculture were not implemented (Rao, 2003).

3.1 The Essential Commodities Act: A tool for crowding out of private investments in agricultural infrastructure.

India's domestic trade policy with respect to agriculture has largely been driven by short-term domestic price trends (Srinivasan, 2007). For instance, if the domestic price of onion and cotton shoots up, suddenly their exports are banned. Similarly, if the domestic price of rice or wheat rises, the policy is tweaked to allow their imports. Saini and Gulati (2017) claim that India's agriculture trade policy oscillates between bans and restrictions on one side and free trade on other. The trade policy's consumer bias in India has proved to be detrimental for farmers. Restrictions on access to markets and exports are by-products of this consumer bias.

In order to further understand the consumer bias in the agricultural trade policy, one must look at the Essential

Commodities (EC) Act, 1955. The Act was implemented in the era when food security was a matter of grave concern in India. This was the time when India was relying on international aid and imports to feed its population. The Act was enacted to prevent hoarding, black marketing of food items, rent-seeking and harassment (Chief Economic Adviser, 2020).

Today, the situation is entirely different. India is net-grain exporting country. The production of food grains increased almost six times, from 50.82 million tonnes in 1950-51 to 284.95 million tonnes in 2018-19. The production of pulses and oilseeds have also increased by the and six times, respectively, in the same period (Directorate of Economics and Statistics, 2020).

However, the EC Act has deterred investments in agricultural infrastructure and especially cold storages and warehouses. As a large number of commodities were classified as essential commodities, the government could invoke the stock limit whenever the price of the commodity rose sharply. If any individual or a company was found to be violating the stocking limits, the government could take punitive actions. The punitive measures ranged from the seizure of the commodity above the prescribed limit and possible judicial action by the government. However, the assumption behind the EC Act was that the sharp rise in price was always due to hoarding and the intermediaries who store the commodities were always exploitative. As most of the crops are harvested once during the year and used throughout, there is always a need for properly storing, transporting and fumigating the commodity. This requires to store them in large cold chains or the warehouses. Although, if the price of the commodity rises sharply, the government is highly likely to impose stock limits. We aren't claiming that dealers do not hoard. There are black marketers who hoard and jack up the prices. But in some cases, it is the market forces which drive the price. As Sabnavis (2015) puts it, there is a very thin line between regular stocking and hoarding.

As the Act is applicable for the entire supply chain, including wholesalers, food processing industries and retail food chains, it does not makes a distinction between possible hoarders and the firms which are genuine stockholders. Do firms have a disincentive to invest in the agricultural infrastructure?

Further, it is the large marketing firms which bear the maximum brunt of the stocking limits. Small traders often escape the imposition of stock limits by illegal means (DEA, 2018). Thus, investments by the private sector in the businesses which require maintenance of large stocks get adversely affected. As a result, it also curtails the competition in the sector as a very few players end up making substantial capital investments.

One might ask how do the stock limits restrict the choice of farmers. Isn't it only the stockholders who are getting affected? Unfortunately, they aren't the only ones who are getting affected. During the season of bumper harvests, farmers have no choice but to sell their produce at a negligible price. Alternatively, they have let their crop go to waste. This wouldn't have been the case if the farmers had access to the cold storages and warehouses. The restrictions on movement, storage and processing deny the producers from getting a fair price (Rao, 2003). Thus it is not just the stockholders who get affected by the EC Act; the farmers also get directly affected.

Through the recent amendments in the EC Act, the government has removed cereals, pulses, oilseeds, edible oils, onions and potatoes from the list of essential commodities. It will help in doing away with the imposition of stock holding limits on such items except under extraordinary price rise, war, famine and natural calamity of severe nature. This would help in ensuring that the private investments in agricultural infrastructure are not disincentivised.

3.2 Agricultural Marketing: Farmers left without any choice

The primary concern of the agricultural marketing policy before independence was to keep food prices for consumers and raw agrarian inputs for the industries in check (Acharya, 2004). There was a significant shift in this view after the independence wherein the interest of the farmers also became a significant concern agricultural marketing policy. The first regulated market, i.e., the Karanjia Cotton Market, was established in 1886 under the Hyderabad Residency order. This market was primarily established for the procurement of cotton for the mills in Manchester. The output of the mills based in Manchester was then sold back to the Indians at a much larger premium. The watershed moment in agricultural marketing was the recommendation by the Royal Commission on Agriculture, 1924, which recommended the regulation of marketing practices and establishment of regulated markets (Acharya, 2004). This can be seen as a precursor to the modern-day APMC Acts.

While regulated markets were being envisaged, the anticipated benefits of having such markets were many. They were seen as a place where marketing practices could be effectively supervised by the marketing committees, which consisted of farmers representatives. It was also seen as a place wherein transparent auctions could be conducted for buying or selling of the produce. These regulated markets could easily ward off the problem of information asymmetry between the farmers and the buyers. The fees collected by the Mandis were to be utilised for developing marketing infrastructure to increase vertical and horizontal integration of the agricultural markets. Efficient market system was envisaged as the means to raise the farmers' income levels and agricultural growth.

However, a decade after the Commission submitted its report, the Agriculture Marketing Adviser to the Government of India noted that the producers have to pay numerous chargers in the markets in order to sell their produce. "Apart from octroi and the arhatiyas' Commission and also various kinds of charges, he has to pay something to the dalal(i) (broker(age)), to the weighman, etc. The total amount of these charges varies and in some cases is as high as 15% of the producer's price" (Livingstone, 1938). In 1938, The Government of India formulated a model bill based on recommendations of the Royal Commission on Agriculture, 1924. This will was shared with many state governments. However, no concrete action was taken until independence.

Meanwhile, several regulated markets were established in India. By the end of the year 1950, there were around 286 regulated markets in the country. Most of the States enacted Agricultural Produce Markets Regulation (APMR) Acts during the g 1960s and 1970s (Directorate of Marketing & Inspection, Undated). Today there are more than 6,000 regulated markets in the country. The State-wise details of regulated markets, including Principal Market Yards (PMYs) and Sub Market Yards (SMYs) are depicted in the table given below:

Table 3.1: APMC Markets across the states

Sl. No.	Name of the State/UT	The area in Sq. km	No. of APMC Markets (Regulated PMYs)	No. of APMC Markets (Regulated SMYs)	Total No. of APMC Markets (Regulated PMYs + SMYs)
1	Andhra Pradesh	162970	22	169	191
2	A & N Islands	8249	No APMC Act	NA	NA
3	Arunachal Pradesh	83743	13	0	13
4	Assam	78438	20	206	226
5	Bihar	94163	0	0	0
6	Chandigarh	114	1	0	1
7	Chhattisgarh	136034	69	118	187
8	Dadra & Nagar Haveli	491	No APMC Act	NA	NA
9	Daman & Diu	112	No APMC Act	NA	NA
10	Goa	3702	1	7	8
11	Gujarat	196024	224	176	400
12	Haryana	44212	108	173	281
13	Himachal Pradesh	55673	10	46	56
14	Jammu & Kashmir	222236	5	20	25
15	Jharkhand	79714	17	173	190
16	Karnataka	191791	162	351	513
17	Kerala	38863	No APMC Act	NA	NA
18	Lakshdweep	32	No APMC Act	NA	NA
19	Madhya Pradesh	308144	257	288	545
20	Maharashtra	307713	306	596	902
21	Manipur	22327	0	0	0
22	Meghalaya	22429	2	0	2
23	Mizoram	21081	0	0	0
24	Nagaland	16579	19	0	19
25	Delhi	1484	7	2	9
26	Odisha	155707	54	382	436
27	Puducherry	562	3	5	8

28	Punjab	50362	151	284	435
29	Rajasthan	342240	139	315	454
30	Sikkim	7096	No APMC Act	NA	NA
31	Tamil Nadu	130058	277	6	283
32	Telangana	114840	150	110	260
33	Tripura	10493	21	0	21
34	Uttar Pradesh	240928	251	372	623
35	Uttarakhand	53484	23	44	67
36	West Bengal	88752	20	455	475
	Total	5290840	2332	4298	6630

Source: (Standing Committee on Agriculture, 2019)

The regulated markets were created to aid the farmers in selling their crops. However, this resulted in the creation of highly fragmented markets. The entire area of the state was divided into various notified market committee areas. This meant that the farmers in a geographical region could sell their produce only in the Mandis notified under the state APMC Act. This restricted the access of farmers to only a single market. Further, there is also a considerable variation in the density of regulated markets in the different parts of the country (Patil, 2013). Today, average area served by an APMC market is 11215 sq. km in Meghalaya, 8889 sq. km in Jammu and Kashmir, 994 sq. km in Himachal Pradesh, 853.35 sq. km in Andhra Pradesh and 798 sq. km in Uttarakhand (Standing Committee on Agriculture, 2019). The National Commission on farmers had recommended that facilities of the regulated market should be available for farmers within a radius of 5

Km, i.e. corresponding market area of about 80 sq. Km. Even in the states of like Punjab and Haryana, this area is 116 sq. Km, and 157 sq. Km respectively.

Table 3.2: Area Served by one APMC across the states.

Sl. No.	Name of the State/UT	Area in Sq.km	Total No. of APMC Markets	Area served by APMC market in Sq. Km
1	Andhra Pradesh	162970	191	853.25
2	A & N Islands	8249		
3	Arunachal Pradesh	83743	13	6442
4	Assam	78438	226	347
5	Bihar	94163	0	
6	Chandigarh	114	1	114
7	Chhattisgarh	136034	187	727
8	Dadra & Nagar Haveli	491		
9	Daman & Diu	112		
10	Goa	3702	8	463
11	Gujarat	196024	400	490
12	Haryana	44212	281	157
13	Himachal Pradesh	55673	56	994
14	Jammu & Kashmir	222236	25	8889
15	Jharkhand	79714	190	420
16	Karnataka	191791	513	374
17	Kerala	38863		
18	Lakshadweep	32		
19	Madhya Pradesh	308144	545	565
20	Maharashtra	307713	902	341

21	Manipur	22327	0	
22	Meghalaya	22429	2	11215
23	Mizoram	21081	0	
24	Nagaland	16579	19	873
25	Delhi	1484	9	165
26	Odisha	155707	436	357
27	Puducherry	562	8	
28	Punjab	50362	435	116
29	Rajasthan	342240	454	754
30	Sikkim	7096		
31	Tamil Nadu	130058	283	460
32	Telangana	114840	260	442
33	Tripura	10493	21	500
34	Uttar Pradesh	240928	623	387
35	Uttarakhand	53484	67	798
36	West Bengal	88752	475	187
	Total	3290840	6630	496

Source: (Standing Committee on Agriculture, 2019)

Further, the emphasis of the regulated markets remained only on the construction activities and collection of market fees (Acharya, 2004). This meant that the efficient regulation of markets did not figure on the priority list of the marketing committees. Even today, the regulated markets in India are fraught by several inefficiencies. APMCs are allowed to collect marketing fee ranging from 0.50 % to 2.0 % of the sale value of the produce. However, this is not the only fee which farmers end up paying. The middlemen charge even a higher fee as commission. The commission charged by the intermediaries ranges between 1 % to 2.5 % food grains and 4 % to 8 % in the case of fruits and vegetables. Negi et al., (2017) also found that the farmers receive a relatively lower price as compared to MSP as they end up paying huge amounts to traders and commission agents in the regulated markets.

Reports after reports have brought this issue to the fore. The Task Force on Employment Opportunities, chaired by the then Member of Planning Commission, Montek Singh Ahluwalia noted that the middlemen “squeeze the realisation of the farmer so that the gap between the farm-gate price and the retail price paid by the consumer is very large” (Ahluwalia, 2001, p. 77). The report further claims that monopoly situation created by the APMCs has led small set of traders and commission agents to extract huge benefits.

Even the report by Committee of State Ministers, In-charge of Agriculture Marketing to Promote Reforms (2013) noted that farmers are not able to realise the remunerative price due to presence of several intermediaries, lack of infrastructure and insufficient stock holding capacity in the Mandis. This begs the question that whose interests are mandis promoting? In most of the Mandis, members are not the farmers; there are traders and agents. Economic Survey 2014-15 documented the amount paid to the mandis as fee/

commission for selling rice and wheat. For rice, the figure was 19.5% in Andhra Pradesh and 14.5% in Punjab. For wheat, the fee and commission amounted to be 14.5% in Punjab and 11.5% in Haryana. Shouldn't the farmer know why is this being used for, especially when now Mandis do not have to carry out any substantial infrastructure development? In most of the cases, the basic infrastructure is provided by the local administration itself.

Such high fee and commission charged by the intermediaries deter farmer from selling their produce in the regulated markets. They have to rely on the local traders in the village itself (Negi, Birthal, Roy, & Khan, 2018). Consequently, they are not able to realise the right price for their produce.

Surprisingly, even after charging such high fee and commissions, APMC markets have failed in creating a robust agriculture infrastructure which could enable the produce to be appropriately cleaned, graded, branded, stored and sold in different geographies.

Table 3.3: State/UT –wise details of market fee/cess being collected by APMCs are as under:

Sl. No.	Name of State/UT	Rate of Market Fee in per cent Ad Valorem	Cess
1	Andhra Pradesh	1.0 (except fish 0.5%, prawn, 0.25%)	NIL
2	Arunachal	2.0	Nil
3	Assam	1.0	Nil
4	Bihar	Act Repealed	
5	Chhattisgarh	Fruits and Vegetable --------------------------- Nil Paddy -2.0	Nil
		Other Commodities – 1.0	
6	Goa	1.0	Nil
7	Gujarat	Perishables 0.5-1.0 Food Grains 0.3-2.0	Nil
8	Haryana	Fruits and Vegetables- Nil Other Commodities-2.0 Cotton 0.8	1% Rural Development Fund Cess, 2 % Rural Development Fund Cess Auction fee- 0.08 per hundred Rupees
9	Himachal Pradesh	1 .0%	Nil
10	J & K	Nil	The market fee is not collected. However, the gate entry fee is collected from the selected markets of Narwal, Parimpora, Sopore, Kulgram, Shopian and Pulwama
11	Jharkhand	1.0	
12	Karnataka	Perishables 1.0-1.5 as service charge Others 1.5%	Nil
13	Kerala	No APMC Act	

14	Madhya Pradesh	Market fee---- 2.0(Except Orange- and Banana-1.0)	Nirashrit Shulk 0.2% cess
15	Maharashtra	0.5-1.0	0.05 Supervision Fee
16	Manipur	No APMC Act	
17	Meghalaya	1 %	Nil
18	Mizoram	Ground rent-Rs 5.0 per sq ft.	Nil
19	Nagaland	Market fee-Rs. 2 per quintal as service charge	Nil
20	Odisha	-Perishables ---1.0 -Food Grains (Paddy-2.0 and remaining- 1.0)	Nil
21	Punjab	Market Fee --- 2.0 Cotton -1.0 For primary trade-3 %	Rural Development Cess 2.0%
22	Rajasthan	F &V ------------user charge Jowar, Bajra, Maize, Isabgole, Cumin 1.0 Other Commodities—1.6	Nil
23	Sikkim	Act not implemented	
24	Tamil Nadu	1.0	Nil
25	Telangana	1.0 (except fish 0.5%, prawn ,0.25%)	Nil
26	Tripura	2.0	Nil
27	Uttar Pradesh	Market Fee---2.0	Development Cess- 0.5%
28	Uttarakhand	Fruits and Veg-1.0 Others---2.0	Development Cess- 0.5%
29	West Bengal	Perishables Nil Paddy----1.0, 6 % for specific buyers Other than paddy 0.5	Nil
B		Union Territories	
30	Andaman &Nicobar Islands	No APMC Act	

31	Chandigarh	Market fee-2.0 on all agricultural produce except maize (1%)	Rural Development Cess 2.0%
32	Dadra and Nagar Haveli	No APMC Act	
33	Daman & Diu	No APMC Act	
34	Delhi	1.0	Entry fee charged depending upon the type of vehicle
35	Lakshadweep	No APMC Act	
36	Puducherry	1.0	Nil

Source: (Standing Committee on Agriculture, 2019)

The APMC Act has also killed competition within the Mandis. The commission agents have formed associations, and they do not allow new players to enter the Mandi. Furthermore, as the government has monopolised the setting up of Mandis and the state APMC acts have curtailed the private sector to establish Mandis to procure the produce directly from farmers. The report on agriculture marketing infrastructure by the erstwhile Planning Commission observed that the marketing reforms weren't going to make any difference unless regulatory barriers which constrain investments in the development of storage and processing are removed (Planning Commission, 2011). It further goes on to say that such regressive regulations hampered the development of effective marketing institutions. They also act as an impediment in letting farmers become internationally competitive. The goal of the APMC Act was to protect farmers from the perceived vagaries of the market (Mehta, 2013). But it ended up an avenue to enrich traders and intermediaries. At the same time, it has harmed farmer from curtailing her access to multiple markets. When the government delisted fruits and vegetables from the APMC markets, the farmers got tremendously benefitted due to the increased competition. They were able to realise a better price for their produce. The consequence of delisting was that the direct sale arrangements got risen considerably in the urban areas (RBI, 2019). A report by Planning Commission (2011) claimed that the direct selling of fruits and vegetables by farmers to the consumers in Andhra Pradesh's Rythu Bazaar and Tamil Nadu's Uzhavar Sandhai helped farmers in realising 15-40% more than wholesale prices. It also proved beneficial for the consumers as they had to pay 15-30 per cent less than retail prices.

The parliament has recently enacted The Farmer (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, 2020. The Act will create an ecosystem wherein producers will be able to sell/buy the agricultural produce out of the regulated Mandis. The farmer will enjoy freedom and choice to sell their produce wherever she finds the remunerative price. It won't be compulsory for the farmers to sell their produce to the markets notified under state APMC Acts anymore. If implemented properly, the new reforms would enable barrier-free inter-state and intra-state trade. The farmers will not have to pay excessively high and unwarranted Commission to the middlemen.

3.3 Infatuation with Cereals: The need for diversification

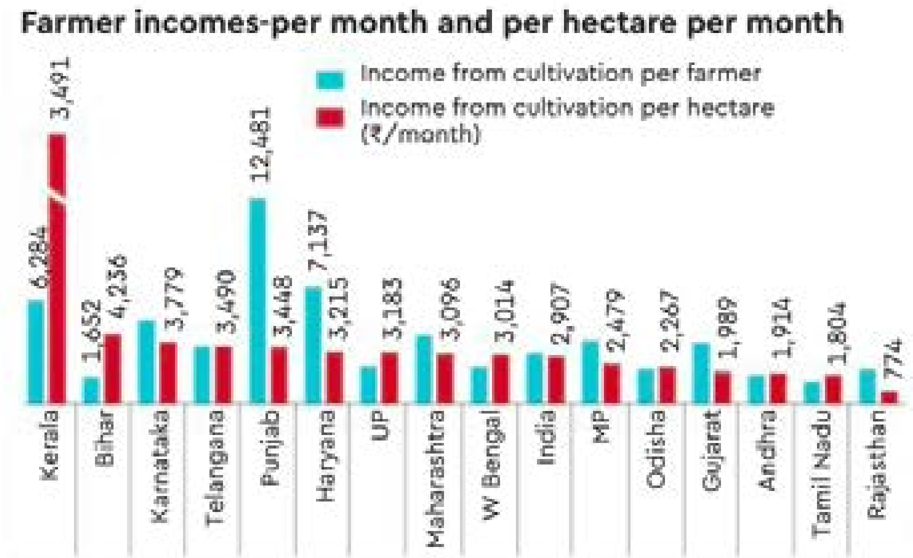
In India, agricultural policy is invariably interpreted as rice and wheat policy. The agricultural policy is also regionally biased, input-intensive and consumes a large amount of land, water and fertilizers (Chief Economic Adviser, 2016).

The Minimum Support Price for rice, input-intensive procurement and subsequent distribution through the public distribution system have distorted markets (Jha, Srinivasan, & Landes, 2007). Farmers in Haryana and Punjab have been cultivating paddy and wheat. The price and procurement policy has taken a toll on the production of other crops. The environmental costs for growing cereals, especially paddy has been too high in case the case of Punjab and Haryana. The water table has plummeted in both of these states.

Furthermore, it is the large farmers who are getting benefitted out of this procurement process. The bias towards rice and wheat has ensured that subsidies on power, fertilizers and, irrigation is readily available for these crops. But are the farmers getting optimum benefits by cultivating merely these two crops? The answer is no.

Saini & Hussain (2020) calculated the state-wise estimate of income generated per hectare. The farmers in Kerala and Bihar, the states which have denounced APMCs long back, generated the highest incomes per hectare, i.e. ₹34,910 and ₹4,236 respectively. They were followed by Karnataka (₹3,779), Telangana (₹3,490) and Punjab (₹3,448). The higher income per hectare in these states has been attributed to crop diversification. This can be attributed to the bias of agricultural policy towards rice and wheat, which are comparatively low valued crops. Unlike Punjab wherein cereals constitute 70% of the total crops grown, in Bihar this figure is just 40%. The Prime Minister recently said that there is a need for increased production of coarse cereals - Millets such as ragi, jowar, Bajra, kodo, jhangora, barri, kotki, etc (Modi, 2020). One way for promoting crop diversification and ensuring that the farmers get prices above minimum support price is 'limited procurement scheme' (Rangarajan & Dev, 2019). When there is a glut of agricultural commodities in the market (other than paddy and wheat), the government can procure the 'excess'. Once the price of the crops breaches the levels of MSP, the government can stop the procurement.

Fig 3.1: Farmer incomes per month and per hectare per month.



Source: (Saini & Hussain, 2020)

As apparent in the table 3.4, in terms of area, the share of paddy and wheat has increase over the years (31.3% in 1960-61 to 1968-69 to 37.3 in 2004-05 to 2014-15). Whereas, the share of Nutri-cereals and Pulses has decreased. Notably, the share of vegetables and fruits (6.5%) in the total cropped area is meagre as compared to paddy and wheat. However, the share of fruits & Vegetables (18.8%) in terms of the value of production is slightly higher than that of paddy and wheat (17.9%). This clearly shows that it is much more profitable to cultivate fruits and vegetables as compared to paddy or wheat.

Crop diversification has been seen as one of the important means to double the farmer's income (GOI, 2017).

Table 3.4: Crop Diversification in India over the years

	Area shares of crops to Gross Cropped Area (%)		
	1960-61 to 1968-69	1975-76 to 1988-89	2004-05 to 2014-15
Paddy & Wheat	31.3	36.0	37.3
Nutri-Cereals	25.5	19.8	12.7
Pulses	14.7	13.3	12.2
Oilseeds	9.5	10.5	13.9
Sugar	1.5	1.7	2.3
Cotton & Jute	5.8	5.0	5.9
Condiments and Spices	1.0	1.2	1.5
Fruits & Vegetables	1.9	3.0	6.5
Other Crops	8.8	9.5	8.0

Source: (GOI, 2017) as cited in (Dev, 2017)

Table 3.5: Share in value of production (2004-05 prices) %

	Share in value of production (2004-05 prices) %		
	1960-61 to 1968-69	1975-76 to 1988-89	2004-05 to 2014-15
Paddy & Wheat	18.2	21.2	17.9
Nutri-Cereals	6.9	5.0	2.7
Pulses	[illegible]	[illegible]	[illegible]

With the diversification of crops, the amount of food wastage will increase, especially in the case of the perishables. Food wastage is a big concern in developed countries. For developing countries, it becomes a concern when the farmers move away from cereals towards perishables. Food loss occurs due to the long chain between the farm and the fork. Once there is greater commercialization and greater crop diversification in India, the food loss issue will acquire the centre stage. As the farmers move away from cereals and pulses to fruits and vegetables, the produce of farmers will become susceptible to more food loss. Unless massive investments are made in cold storages and agro-processing infrastructure, the farmers will not switch towards crop diversification. The recent reforms including the amendments in EC Act and enactment of The Farmer (Empowerment and Protection) Agreement of Price Assurance & Farm Services Act, 2020 would attract private investments for setting up of this infrastructure. The government's efforts to nudge states to adopt E-NAM, i.e., e-trading platform for agricultural commodities is also a step in the right direction.

Conclusion

Reforms are about competition and choice. They do not always create a win-win situation (Debroy, 2020) for every stakeholder. This shall be the case for the middlemen in the Mandis as farmers will get directly connected to the market. However, the recent agricultural reforms will prove to be a win-win situation for small landholder farmers and even the landless farmers. They will also get the choice and freedom to sell their produce outside the Mandis.

The reforms will also help them in negotiating a better price for their produce. A scheme for creation of 10,000 FPOs has recently been announced by the government. This has been supplemented with creation of the Agriculture Infrastructure

Fund (AIF) of `1 lakh crore which will be anchored largely by FPOs. A scoping review of the contribution on Farmers' Organizations on smallholder agriculture in Sub-Saharan Africa and India found that the FOs/FPOs can be very effective in providing access to alternative marketing channels to the farmers. The most common services of FOs include 'marketing services to increase product sales' and 'providing access to market information' on product prices and trends, seasonality and regional changes (Bizikova , et al., 2020).

The amendments in the EC Act will also create a win-win situation for the farmers as this would attract investments for the creation of better storage facilities, including cold storage. It will also contribute farmers to pursue crop diversification, as there will be avenues to sell the perishables at the farmgate itself. It will also prevent the wastage of Agri-produce that happens due to lack of storage facilities. There will be fewer sights of farmers throwing their produce on roads out of dismay.

The reforms will also help in increasing the competition for buyers. This essentially means that the regulated market, i.e. the APMC, will also have to reduce its fees and commission agents their commissions. The reforms will also lead to better spatial integration and discovery of prices by removing the barriers in inter-state trade. This will help farmers of regions with surplus produce to get better prices and consumers of areas with shortages. India will have one common market for agricultural produce. In standard practice, our farmers look at the last year's prices and decide how much to sow. The new contract farming legislation includes a provision for safeguards in contracts and such assurance of a price to the farmers at the time of sowing will help them take cropping decisions based on forward prices. The new system will minimise their market risks.

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