### Emperor Journal of Agricultural Research

ISSN: 2584-2641	Mayas Publication <sup>®</sup>	wwwmayas.info
Volume - II	Issue-I	January 2025

# Need and Requirements to Change the Mindset of Youth Regarding Agriculture in India

### T. V. Ushadevi

Associate professor Department of Economics S N College, Cherthala

### Vrinda V Chandra

Research scholar Indian Statistical Institute, Delhi

### Abstract

The real potential of agriculture has not yet been realised in India. Taking into consideration the current demographic features of the nation, it is both important and necessary to invest in the sector. But on the contrary, we can witness that youth is stepping back from agriculture gradually. With the examination of the reasons for the same and identification of way outs, it can be concluded that modernisation of the sector is a need indeed. Technological transformations, which can be realised with the help of cooperatives, is a better alternative in this neoliberal era. The study analyses the need to change the mindset of youth regarding agriculture and requirements for it.

### I. INTRODUCTION

Agriculture plays an indispensable role in any economy, whether it is rich or poor. India could improve its food security conditions impressively through the agricultural policies after independence, especially introduction of HYV seeds, modern technology and land reforms. But in this neoliberal era, we have seen a gradual withdrawal of government support in the Indian agriculture sector. And the recent rural phenomenon is that the younger generation is stepping back from agriculture. Most of the youth are not interested in picking farming as their profession. But the present scenario is such that the sector is in need of big transformations which require youth- participation.

According to the 2019 Rural Development Report by the International Fund for Agricultural Development, young people are approximately three times more likely than adults to be unemployed. Most of the youth migrate from rural areas to cities in search of jobs without realising the opportunities available to them in their own areas. Report by the Food and Agricultural Organisation says that "Young people engaging in distress migration are more vulnerable and at a greater disadvantage than older migrants". It also adds that youth are most likely to be unemployed and underemployed.

India has the world's highest number of 10 to 24-year-olds, with 356 million—despite having a smaller population than China, which has 269 million young people (UNFPA 2014). In order to reap the benefits of this demographic dividend, the country should boost its youth with opportunities and resources. Agriculture is a sector that can provide a lot of opportunities if structured and modernised nicely. So it is important to think of policies to modernise agriculture and attract more youth towards it."If educated youth choose to live in villages and launch the new agriculture movement, based on the integrated application of science and social wisdom, our untapped demographic dividend will become our greatest strength" (M S Swaminathan 2011).

## Objectives

1) To understand the reasons behind withdrawal of youth from the agriculture sector.

2) To analyse the necessary requirements to attract youth to agriculture.

### Methodology

Declining participation of youth in the agriculture sector is an issue of major concern in India. This study aims at looking more deeply into the same with the help of secondary data. Major sources of data are National Sample Survey (NSS) Reports, Reports of Reserve Bank of India (RBI), Reports of International Organizations like United Nations (UN) etc.. Inability to collect and analyse primary data stands as a limitation to the study.

### Withdrawal of Youth from Agriculture

Farming has become an aging occupation in India. According to the Input Survey 2011-12 (released in 2016) by the Union Ministry of Agriculture and Farmers' Welfare, the average age of an Indian farmer is 50.1 years. Estimates show that there has been a dramatic reduction in the share of working-age group (20 - 59 yrs) engaged in agriculture in India to 23.3% in 2018-19 from 40% in 2004-05. Only about 14.4% of young adults (20 - 29 yrs) were working on farms in 2018-19, down from 34% in 2004-05 (Vidya Mahambare et al 2021). Between 1991 and 2011, 1.5 crore farmers dropped out of agriculture, with most becoming landless farm labourers (P Sainath 2018). This raises two types of concerns: one regarding the future of the agriculture sector and food security of India and second regarding the livelihood of people who quit agriculture.

### **Evidences from NSSO Reports:**

From Table 1, we can see that the percentage of population engaged in agriculture sector have declined consistently across all age groups from 2004-05 till 2018-19. But the decrease is considerably high in the case of younger age groups. The last row of Table 1 gives further insights to this matter. It shows that the total decrease in percentage gets smaller and smaller as you move towards older age groups. And the difference among them is also of high magnitude. To the contrary, there is a slight increase in the year 2020-21. This can be considered as an impact of the Covid on the then jobs of many temporary workers, compelling them to turn to agriculture.

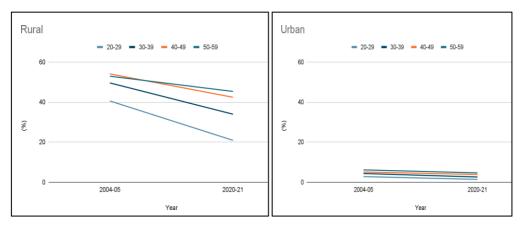
		Age Group (years)								
Year	20-	25-	30-	35-	40-	45-	50-	55-		
	24	29	34	39	44	49	54	59		
2004-05	36.5	44.6	47.3	51.8	52.9	55.2	53.2	52.6		
2007-08	33.3	40.1	44.9	48	50.1	52.1	51.7	51.2		
2009-10	29.3	37.9	41.5	43.8	45.9	48.6	49	46.6		
2011-12	20.5	25.7	29.3	32.6	34.9	36.4	34.8	34.8		
2018-19	14.1	22	26.3	31.9	36.1	38.9	41.9	39		
2020-21	16.2	25.6	30.8	37.1	40.4	44.4	45.3	45.3		
Percentage difference between 2004-05 & 2020-21		19	16.5	14.7	12.5	10.8	7.9	7.3		

 Table 1: Percentage distribution of persons who reported their current weekly

 activity as agriculture in different years for each age group in rural areas

Source: Annual Reports of Employment and Unemployment Situation (EUS) Surveys and Periodic Labor Force Surveys (PLFS)

# Figure 1: Comparing percentage distribution of persons who reported their current weekly activity as agriculture in 2004-05 and 2020-21 for each age group in rural and urban area



Source: Annual Reports of Employment and Unemployment Situation (EUS) Surveys and Periodic Labor Force Surveys (PLFS) Figure 1 above tells us that this withdrawal of youth from agriculture is a rural phenomenon. In the rural case there is a drastic decline in the percentage of population reported as working in the agriculture sector in the 20-29 age group compared to 50-59. The line becomes flatter and flatter as you move towards older age groups. In the urban case, the percentage of population, depending agriculture for livelihood is much lower than that of the rural areas. Here, the proportion of the population engaged in agriculture rises as you move towards higher age groups. And even though there is not much decline in percentage between the periods 2004-05 and 2020-21, that much of decrease looks similar across all age groups.

### Interest in farming

The Situation Assessment Survey of Farmers (NSS 59<sup>th</sup> round) conducted in 2003 reported that though 60% of farmer households opted farming as their profession, 40% of them were willing to shift to other jobs if available. 27% of farmers disliked farming because it was not profitable and 8% thought it was too risky.

The survey conducted by Centre for the Study of Developing Societies (CSDS) in 2013-14 also found similar results where in 22% of the farmer households disliked farming and majority reported lack of sufficient income as the main reason. And around 47% of the farmers believe that the overall condition of farmers in India is bad. Now, one of the striking results of the survey is that 76% of the youth belonging to farmer households prefer to do some other works than farming. 62% of the farmers believe that city life is much better than village life. Only 18% of farmers would like their children taking up farming as a profession, while 36% of them do not want their children continuing with farming.

The above results of different surveys give clear insights to the mindset of farmers regarding their own profession and future of their children. It can be seen that most of them perceive themselves to be in a bad condition and do not want the upcoming generation taking up farming as a profession. It shows that if employment opportunities are available in cities, farmers are willing to migrate and quit farming. That is, instead of rural areas getting modernised, more and more people are moving into booming cities which again will contribute to rising rural-urban disparity and make cities overcrowded. Majority of the youth do not even have interest in farming. It is important to analyse why the young generation want to move away from agriculture and how agriculture can be made attractive for them.

### What could be the reasons?

Jobs in the agriculture sector are always perceived as ones that demand a lot of time, rough work, manual labour, energy. It is seen as a career option for uneducated and less educated people. While we don't recognise the fact that educated mankind can do wonders by exploring the real potential that agriculture has in India.

First of all, agriculture is always presented as a sector that is of high risk and low paying. Starting from the education that you get from home and school, farmers are described as the suffering population who always fall into debt traps. There is a decreasing interest among youth in entering agricultural related fields due to the persistent perception of agriculture as an outdated field with minimal financial returns (Paisley 2013). So naturally even people who have inborn interests in farming would rationally seek other options.

It is also true that the farm sector has not been able to patch up with the growth and developments made in other non farm sectors. Studies find higher education and greater number of skills lead to greater propensity to migrate (Amrita Sharma & Anik Bhaduri 2009). Having gained better education, they get attracted to more technically advanced sectors. They feel that working in farmlands is of lower dignity. And the highly educated professionals feel that farm labour is not intellectually satisfying, as it does not involve creativity and expression (NAARM 2011).

### How to Modernise Agriculture?

Modernisation of agriculture is essential in two dimensions: technical transformation and organisational changes. Non profitability of farming has always been an issue of debate. But why farming continues to be less profitable and more risky, and how to overcome this challenge are not discussed adequately. One of the reasons is that agriculture has not moved up along with technological development. Modernization by and large means adoption of improved seeds, modern farm machinery such as tractors, harvesters, threshers, etc., and use of chemical fertilizers and pesticides in an optimal combination with water (B H Dholakia & R H Dholakia 1992). In developing nations, agricultural productivity has been hindered by the failure of farmers in using high levels of modern inputs and adopting improved agricultural practices (Emerick et al 2016). Bringing in technically advanced methods of production would change the whole outlook of the sector. Moreover, in the current world of globalisation and neoliberalism, certain organisational changes are necessary for making farming an attractive occupation for youth.

### Need for technical transformation:

Green revolution was a breakthrough in the history of food security of India. The introduction of High Yield Variety (HYV) seeds could increase the production dramatically, especially of rice and wheat, in states where irrigation was sufficiently available. The use of modern technologies in farming helped a lot in fueling self sufficiency of India. Operation Flood (1970), the world's largest dairy development programme associated with white revolution increased the potential of India's dairy industry in a great deal. It transformed India from a milk deficient country to the world's largest milk producer with 22 percent of global production. The development of dairy cooperatives immensely contributed to increased production and consumption of milk. Other major revolutions were the Silver revolution, Blue revolution, Yellow revolution etc.

What we need more is also major revolutions like the ones above, which can increase the productivity and profitability of farming. Research and experiments are also going on for finding new varieties of seeds that can withstand drastic climatic variations like drought tolerant and flood tolerant seeds. These can have two impacts on earnings; one by raising expected income of farmers and the other through reduction of downside risk, motivating them to invest more and produce more. Technological innovations that result in reduction of risks in agriculture can bring in major impacts on farmers income and will also attract more youth to farming since most of them reported risk as one of the main reasons for disliking farming.

Since land is fixed and is getting divided into smaller and smaller landholdings as population rises, land augmenting technologies is another way through which agriculture can be modernised. Expansion of large scale irrigation through big projects right after independence immensely helped in the implementation of HYV seeds. Because it benefited areas which had good irrigation. Technical changes can be brought in in the whole process of farming starting right from getting the field ready for sowing seed till harvesting. In case of agriculture, location specific research and implementation of new technologies apt for that local area would be more efficient. Because the problems farmers face in each area differ.

Farmers in India still have an inertia towards the traditional methods of farming and it's hard to convince them to update to modern methods. A study conducted by T E Epule & C R Bryant reveals that older respondents tend to adopt conventional farming techniques more than other categories due mainly to inertia or the inability to adapt to changes and their limited propensity to adopt agroecology techniques. And in the Indian scenario, we can see that the proportion of older farmers is increasing. So it seems important to use the available digital platforms to make farmers aware about the need to implement such technologies rather than being locked up in the traditional techniques which are very time consuming and less efficient. It can be inferred from table 2 that only 49.4 percent of the operational holders use tractors and only 8.4 percent of the holders own the tractor they use, others hire it. We can also see that still

30.2 percent of the operational holders use wooden plough for tilling the land. Farmers having much advanced mould board plough or power tillers are comparatively low. And the figures get worse as the size of the operational landholding reduces. It is also known that 85 per cent of India's farmers operate less than five acres of land (Sukhpal Singh 2021). This implies that thesector requires a significant restructuring from the bottom most section of farmers. It is clear that even the use of tractors haven't become popular among these categories and still a significant proportion is using wooden plough. It is high time for them to be familiar with advanced technologies. But for most of them availability of credit is a big constraint. It is also evident from the fact that most of them are not in a position to own the machines required and are hiring it.

Size Groups	Plough		Board	Mould Board Plough		Pumpsets (Diesel/Electric)		Power Tiller		Tractor	
	Ι	Π	Ι	Π	Ι	Π	Ι	Π	Ι	Π	
Marginal (below 1 ha)	26.1	3.5	8	2.9	16.3	11	2	10.4	5.3	41.6	
Small (1-2 ha)	28.2	4	12.7	4.6	30.4	7.9	3.5	10.8	10.2	43	
Semi-mediu m (2-4 ha)	29.2	3.5	13.9	4.3	35.9	6	5	8.3	16.9	37.3	
Medium (4-10 ha)	27.2	2.6	12.7	3.8	42.6	4.2	6.5	7.4	29.6	32.6	
Large (10 ha)	20.3	1.8	9.5	2.6	41.4	2.5	6.7	5.2	39.3	32.3	
All size groups	26.7	3.5	9.6	3.4	21.8	9.7	2.8	10.1	8.4	41	

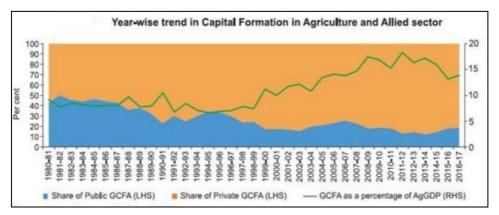
Table	2:	Percentage	of	operational	landholdings	using	agricultural	
implements/machinery [owned & used (I), hired (II)]								

Source: Input Survey 2016-17, Union Ministry of Agriculture and Farmers' Welfare

In the dirigist regime, when major agricultural revolutions like green revolutions happened, the agriculture sector did receive immense support from the government. Taking into consideration the importance of self sufficiency and food security, a lot of programs were implemented. But now in the neoliberal era, priorities of the government have changed. In fact, it is the globalised finance capital that decides the areas of investment. As it can be seen in Figure 2, the proportion of capital formation in agriculture sector is declining in recent years. According to the Report of the Internal Working Group to Review Agricultural Credit, RBI, the public GCF which was at

43.2 per cent during 1980 - 81 has come down significantly to 18.8 per cent during 2016-17.

Figure 2: Shares of Public and Private sectors in Gross Capital Formation in Agriculture (GCFA) and GCFA as a percentage of Agriculture and Allied sector's GDP



Source: Report of Reserve Bank of India (RBI), 2019

Government supports and interventions in the sector have reduced and the sector is moving into the hands of corporates. MNCs are capable of making big investments required for large scale implementation of modern technologies and thereby increasing productivity. But this has two severe impacts on the economy. First, they will be interested in producing products that have export value. Therefore the whole composition of production would shift towards such products resulting in shortage of commodities we consume, which poses a big threat to the food security of the nation. Second, increased productivity will not result in increased income for farmers as they lie in the bottom most part of the global value chain with least bargaining power. Thus, it is important to think about an alternative through which increased productivity can be viably achieved through use of modern technologies without distorting the interests of farmers and the nation as a whole. The next section tries to give an insight over this.

### Need for organisational change - Role of cooperatives:

Cooperatives are organisations owned and managed by its members. In agriculture, individual farmers unite together to increase their joint productivity and empower its members with economic and social supports. Sustainable cooperatives can be a milestone on the path of rural development. Cooperatives play a crucial role in reducing poverty, improving food security and generating employment opportunities (FAO 2012).

In the Marxian literature, peasants do not form a particular class and are self interested which forms a barrier against their development in a capitalist economy. "There is merely a local interconnection among these small-holding peasants, and the identity of their interests forms no community, no national bond, and no political organization among them, they do not constitute aclass. They are therefore incapable of asserting their class interest in their own name, whether through a parliament or a convention" (Karl Marx 1937).

When farmers stay as individual persons, the quantity of capital they own and amount of credit available to them is very less. As we have seen, capital and credit availability is one of the major constraints in front of them. And in this neoliberal era, with the development of corporate agriculture, the smallholding farmers are supposed to bargain with multinational corporations where they will end up getting the least possible. Farmers lie at the bottom of the global value chain. The amount they receive for selling raw products is way less than the actual monetary value of the product when it comes in market for buyers to purchase. So here comes the concept of cooperatives, which raises the question why can't the whole process starting from production to marketing be managed by farmers themselves.

To proceed with the above ideology, first farmers should come out of the mindset of petty producer and collectively invest in agriculture. They can pool all their resources together and thereby will be in a position to make large scale investments. For example, in the above section we saw that a significant section of farmers are incapable of owning machineries. Now with pooling of resources they can collectively buy most modern equipments required for farming. And one major advantage in community ownership of capital is that risk will now be shared among a vast population. Each individual person will be ready to try out new technologies because they themselves feel that there is nothing to loose now, everything is collectively owned. Another major spill over effect would be the benefits of large scale production.

Now we can see that the bargaining power of farmers would be very substantial. Earlier everyone was an individual, so due to high competition, they were forced to accept low price offers. With cooperatives, they will be able to sell products at a reasonable rate. If cooperatives are sufficiently large, they themselves can manufacture the product and sell the final product, rather than selling raw product to an intermediate person, which would result in a substantial increase in their income. So development of cooperatives do play a crucial role in the economy. Starting from a small collective group who pool their resources and cultivate initially, can expand as their profits increase and move on to the manufacturing and distribution sections. This would place farmers on top of the global value chain with highest bargaining power. Because now right from production to distribution, cooperatives have a role to play.

### A short note on an initiative, Brahmagiri Development Society (BDS):

It is an NGO registered legally as a special purpose society in Wayanad district under the Government of Kerala in 1999. The organisation states their mission as, "Brahmagiri aims at establishing software enabled farmlands, weaving out a digitized system in the 'Seed to Market' process chain. The target is to start a chain of high quality food production units, warehouses and pack houses in rural areas, linking them with the market both through online as well outlet

based platforms". In order to avoid intermediaries, they act as a connection between farmers and consumers. Products are collected from farmers, then manufactured and further distributed through various outlets. The recent modern cooperative farming scheme of the BDS, 'Brahmagiri Wayanad Coffee' aims at doubling the income of coffee farmers in Wayanad. The annual turn over of BDS in 2010-2020 was more than Rs 30 crore.

### **II. CONCLUSION**

Recent developments in the age structure of people employed in agriculture sector raises many concerns which has to be addressed soon. Percentage of population employed in agriculture have seen a decline consistently over years but the decrease is higher among younger age group which results in an old farming population. If the sector is not able to attract younger generation in coming years, total agricultural production will be badly affected, raising big threats to the food security of the nation. Most of the youth reported to dislike farming because of less profitability and risks. There are also other social stigmas associated with farming wherein an educated person feels a reduction in his dignity when he chooses farming as an occupation. A way out of this crisis is to modernise the agriculture sector. Two kinds of modernisation, namely technical transformation and organisational changes, can improve the current situation of farmers. Reports reveal that farmers still have an inertia towards some inefficient old methods of farming. A significant portion is still using wooden plough to till their land and are not in a position to own tractors. On the other hand, public gross capital formation in agriculture have seen a drastic decline, which is not unexpected in this neo liberal era. So what comes as a solution is formation of cooperatives. This enables farmers to bring in large scale investments in modern technology and it has the potential to increase their income substantially. For them to be sustainable, cooperatives should be financially independent and not rely on government funds.

If cooperatives become successful in making interconnections between farmers in the whole country, the total outlook of the sector would gradually change. If so, the youth won't leave agriculture and search for other career options, as seen today. Because agriculture would become a sector where they can make creative contributions. It won't be just farming on the land. Increased use of technology would also increase the demand for new and more efficient technologies. So research regarding this would open a big door of opportunities for youth. Even farming would become interesting, because of the application of modern technologies which reduces the manual effort required.

### **III.REFERENCES**

- Amita Sharma and Anit Bhaduri (2009), The "Tipping Point" in Indian Agriculture:Understanding the Withdrawal of the Indian Rural Youth, Asian Journal of Agriculture and Development, Vol. 6, No. 1
- Bakul H. Dholakia and Ravindra H. Dholakia (1991), Modernisation of agriculture and economic growth : the Indian experience, CDS occasional paper. Glasgow, ISSN 0952-8849, ZDB-ID 2725283-8. Vol. 9
- Centre for the Study of Developing Societies (CSDS) (2015), State of Indian Farmers: A Report, CSDS, Delhi.( (<u>https://www.lokniti.org/media/upload\_files/Report%20Farmer%20Survey.pdf</u>)
- Emerick, Kyle, Alain de Janvry, Elisabeth Sadoulet, and Manzoor H. Dar (2016), Technological Innovations, Downside Risk, and the Modernization of Agriculture, American Economic Review, 106 (6): 1537

- Epule, T.E., Bryant C.R (2017), The adoption of agroecology and conventional farming techniques varies with socio-demographic characteristics of small-scale farmers in the Fako and Meme divisions of Camero
- Food and Agriculture Organization of the United Nations, International Fund for Agricultural Development, World Food Programme (2012), Agricultural cooperatives: paving the way for food security and rural development. (http://www.fao.org/3/ap431e/ap431e.pdf)
- Ganguly, Kavery; Gulati, Ashok; von Braun, Joachim (2017) : Innovations spearheading the next transformations in India's agriculture, ZEF Working Paper Series, No. 159, University of Bonn, Center for Development Research (ZEF), Bonn.
- Government of India, All India Report on Input Survey 2011-12, 2016-17, Agriculture Census Division, Department Of Agriculture, Cooperation & Farmers Welfare, Ministry Of Agriculture & Farmers Welfare, New Delhi.
- Government of India, Annual Reports of Employment and Unemployment Situation (EUS) Surveys and Periodic Labor Force Surveys (PLFS), National Sample Survey Organisation, Ministry of Statistics and Programme Implementation.
- Government of India, Situation Assessment Survey of Farmers (NSS 59th round), National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, 2003
- International Fund for Agricultural Development (IFAD) (2019), Creating opportunities for rural youth, 2019 Rural Development Report.
- Karl Marx (1937), The Eighteenth Brumaire of Louis Bonaparte, Progress Publishers, Moscow Karl Marx (1970), Critique of the Gotha Programme, Progress Publishers, Moscow.
- Karl Marx and Frederick Engels (1969), The Communist Manifesto, Selected Works of Marx and Engels, Vol.1, Progress Publishers, Moscow.
- Laura Deotti and Elisenda Estruch, ESP (2016), Addressing rural youth migration at its root causes: A Conceptual Framework, FAO.
- M S Swaminathan (2011), Youth for Agricultural Transformation, Forum of Free Enterprise, July2011 (http://59.160.153.188/library/sites/default/files/Youth%20For%20Agricul tural%20Transformati on%20-%20Dr.%20M.%20S.%20Swaminathan.pdf) National Academy of Agricultural Research Management(NAARM) (2011), Assessment of Future Human Capital Requirements in Agriculture and Allied Sectors, NAARM, Hyderabad

- Patnaik P (2014), Imperialism and the Agrarian Question, Agrarian South: Journal of Political Economy, 2014;3(1):1-15.
- Patnaik P (2009), Socialism and the Peasantry, International Development Economic Associates (IDEAS).(<u>https://www.networkideas.org/featured-articles/2009/01/socialism-and-the-peasantry/</u>)
- Paisley, C (2013), Engaging youth in agriculture: investing in our future, Global food for thought: official blog for global agricultural development initiative. (https://globalfoodforthought.typepad.com/global-food-forthought/2013/02/commentary-engagi ng-youth-in-agriculture-investing-inour-future.html)
- Preetha Nair (2018), Agrarian Crisis Is A Social Crisis Now: P. Sainath, Outlook, 08 December 2018. (https://www.outlookindia.com/website/story/agrarian-crisis-is-a-socialcrisis-now-p-sainath/321 306#amp\_tf=From%20%251%24s&aoh=16616853987575&referrer=https %3A%2F%2Fwww.g oogle.com&ampshare=https%3A%2F%2Fwww.outlookindia.com%2Fwebsi

te%2Fstory%2Fagra rian-crisis-is-a-social-crisis-now-p-sainath%2F321306)

Som, Sukanya & Roy Burman, Rajarshi & Sharma, J & Padaria, Rabindra & Paul, Sudipta & Singh, Anil. (2019), Attracting and Retaining Youth in Agriculture: Challenges and Prospects, Journal of Community Mobilization and Sustainable Development Vol. 13(3),385-395.

Sukhpal Singh (2021), Future of Indian agriculture and small farmers: Role of policy, regulation and farmer agency, Down to Earth, February 2021. (https://www.downtoearth.org.in/blog/agriculture/future-of-indian-agriculture-and-small-farmers -role-of-policy-regulation-and-farmer-agency-75325)

United Nations Population Fund (UNFPA) (2014), The power of 18 billion: Adolescents, youth and transformation of the future, The state of world population 2014

Vidya Mahambare,Sowmya Dhanaraj and Sankalp Sharma (2021), Workers are moving off Indian farms but where are they going?, Live Mint, 25 March 2021 (https://www.livemint.com/opinion/online-views/workers-are-moving-off-indianfarms-but-wher e-are-they-going-11616603448650.html)