Volume 1. No. 2

ECONOMY POLITY ENVIRONMENT

An International Peer-reviewed Journal of Social Studies

Agriculture: The Potential Vehicle for Next Economic Revolution

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Abstract

In spite of many achievements of India in different fields, our farmers are still suffering from starvation. The next generation of the farming community is no way going to remain in the sector if we do not make the agricultural sector economically more lucrative. The paper discusses about the major impediments like small agricultural land holding, high investment on land, lack of transport and storage facilities, lack of well-established market for agricultural products, unholy intervention of the middlemen etc. which make it difficult to turn the sector into a profitable enterprise. The paper also talks about the possible way outs like rectifications in the laws regarding Farmer producer Organisations, welcoming the private sector in the field of agricultural finance, following organic soil revival procedures and wastewater management.

Keywords: *Farmer Producer Organisations, agricultural finance, soil revival, crop rotation, wastewater management*

Received on August05, 2018; Revision received: November 26, 2018, Accepted: December 15, 2018

Introduction

Our country has many achievements in the sphere of science & technology and has great enterprises which make us proud. 'Mangalyan' has been sent into the orbit around Mars. In industry and commerce, there are many things which inspire awe of others. But which we often miss to recognize is the achievements of our farmers. They without much modern technology and infrastructure are still managing to feed 1.3 billion people just out of their traditional knowledge. This is to me a great achievement and wonder. At the same time this is our shame that the farmers who provide us with food are suffering from starvation and he wants to take his own life. In the last ten years, our 300000 farmers have committed suicide. Most of our farmers don't want their son to become farmer and pursue them to take factory or office job.

Potential Food basket of the world

Nature has blessed our country with such an exact combination of needed latitudinal spread of weather, soil and climatic condition which enables us to grow food all through the year. With this we have a large population that has the intrinsic knowledge to perform the magic of transforming mud into food.

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But unfortunately it is our general attitude is that we don't pay much regard to the profession of farming and treat our farmers as uneducated. But the fact is to make a non-farmer farmer, it will involve a long rigorous training which our farmers are inheriting generation to generation and we take it as a 'free gift of nature' and do not attach any value. In the farming profession there is neither assurance of profit nor much respect. So there is little hope of the next generation going into agriculture if we don't transform this sector into a very lucrative activity.

Here we are talking about urbanizing rural India and there the rural population is going to the urban areas to earn livelihood. This is no good either from the social or from the economic perspective. Leaving their family security, they are coming to the unfamiliar spaces in the search of money and comfort. But most of them have little formal education, so are getting engaged in petty jobs where there is no economic security or social recognition.

Struggle for existence

Now looking at the present scenario of Indian agriculture we see the greatest impediment to make agriculture a hugely profitable enterprise is scale – the land holing is too small and is becoming smaller and smaller day by day. The agricultural census 2015-16 shows that the average size of Indian farm land shrank by over six per cent between 2010-11 and 2015-16, with operational holding in the country dropping to 1.08 hectares from 1.15 hectares in 2010-11. With land holding getting smaller, the share of small and marginal holdings (between 0 and 2 hectares) in the country has risen to 86.21 per cent of total operational holding in 2015-16, which comes to around 126 million, as against 84.97 per cent in 2010-11. On the other hand, the share of semi-medium and medium operational holdings (2-10 hectares) in total land holdings dropped from 14.29 per cent to 13.22 per cent, while that of large holding (10 hectares and above) fell from 0.71 per cent in 2010-11 t 0.57 per cent in 2015-16. One interesting fact the census shows is that the percentage share of female operational holder increased from 12.79 per cent in 2010-11 in total holdings to 13.87 per cent in 2015-16. This tells us that more and more females are participating in the management and operation of agricultural lands. But is this due to women empowerment or due to compulsion, as the male counterparts are leaving for the towns and the cities for the alternative job options, I wonder.

Now if we look at the cost side it involves a huge investment esp. in irrigation. Each farmer has its own pump set, his own bore well and electrical connection. The kind of seeds and chemical fertilizers used right now since the green revolution of 1960s, sufficient water on the land is a basic necessity. With constant bifurcation of land, the average land holding today is just over one hectare as we see in the last agricultural census. With this one hectare, the kind of investment it needs is so high that debt is inevitable and the farmer either has to sell his land, run away from his village or hang from a tree.

Next when the time comes for selling the produce there are arrays of issues regarding transport, storage and even a proper established market. Our farmers being scattered individuals lack negotiating power. So getting the right price for their produce is a big struggle for them. And when the farmers, not getting the right price, want to sell it to the government in minimum support price, the unholy middlemen are barring their way. Finding no other way, they sell it to the middlemen in lower prices even accepting losses.

Scaling Up Agriculture

To help the small and marginal farmers, our government has taken so many initiatives. There is the concept of Farmer Producer Organization (FPO). The concept consists of collectivization of producers, especially small and marginal farmers (holding land between zero to two hectares), so as to form an effective alliance to collectively address the challenges they face. There is the National Bank for Agriculture and Rural Development (NABARD), Small Farmers Agribusiness Consortium (SFAC), Indian Society of Agribusiness Professionals (ISAP) who has promoted hundreds of FPOs. They basically work to mobilize small and marginal farmers into groups called Farmer Interest Group (FIGs), forming Farmer Producer Organization (FPOs) to improve access to investment, technology, inputs and markets. They also conduct training programmes to help farmers to enhance productivity in a sustainable manner.

In spite of so many efforts still we are worried about agricultural productivity and growing distress among our farmers. The loop holes of government promoted FPOs are that there is lack of transparency in the legal structure and timely working out of loans. The farmers have fear that if they come under an FPO, they may lose control over their own land. So, it is necessary to create a proper legal structure to ensure that farmers retain control over their land and it is one hundred percent safe for them.

On the other hand, agricultural finance has so many aspects. Different government institutions give short term loans (upto 15 months) for the purchase of seeds, fertilizer. Pesticides, feeds on fodder of livestock, marketing of agricultural produce, payment of wages of hired labours etc. Medium term loans (15 months to 5 years) are given for purchase of cattle, small agricultural implements, repair and construction of wells etc. Long term loans (beyond 5 years) are required for permanent improvement of land, digging tube wells, purchase of larger agricultural and machinery like tractors, harvesters etc. and repayment of old debts. All these aspects cannot be effectively financed by the government because the very nature of government finance is that it may not always be timely. And time is vital aspect for tree-based agriculture where plantation has to happen at particular time.

Only the private sector can show the necessary agility to support farmers in the time of need. So, we should welcome them in agricultural finance. But to attract the private corporate into this field, agriculture has to be a very profitable business. To make it happen, scaling up agriculture is the only way. Right now the maximum number of farmers under an FPO is around 700 to 1,000 and maximum land covered is around 4,000 hectares. But all of these are government run FPOs which function basically on no profit-no loss condition. The corporate sector can invest in creating large scale demonstration by taking let's say 25,000 farmers and 100,000 hectares of land. They can establish community micro-irrigation and supply water on rent. This will save the farmers from sinking large amount of capital in irrigation. The farms are aggregating produce from a large number of farmers. This will enable them to negotiate for better market price, the benefit of which can be shared between the farmers and the farms. The only thing the government has to do is to create a proper legal structure, so that the farmers feel hundred percent safe and the investors feel protected with a viable payback process. If we can create this kind of support for our farmers, so that they do not have to bother about anything else other than growing food, India can be the bread-basket of the world. And if people see the huge economic success of this model, then there will be no stopping it. People will start taking it around the country.

Reviving India's Soil

Our country has a history of thousands of years of organized agriculture. But today a lot of land is becoming unusable in one generation. Over the years, increasing pressure on limited agricultural land

in India has made our soil 'fatigued'. This is due to overuse of chemical fertilizer, excessive tillage, abandonment of age-old organic soil revival practices and lack of appropriate crop rotation.

Form the time of green revolution of 1960s, our farmers were told that they should cut down all big trees in their land, otherwise the big trees will consume all the fertilizers they are putting in the soil and will hamper their productivity. So, now if we look at our agricultural fields, we see no tree-shed hectare after hectare. And this has become a country-wide practice. But if our farmers are to get good yields on a sustainable basis and make a living out of agriculture, the soil does not need chemical inputs, it needs organic content. Soil will be healthy only if we have trees and animals on the land so that the leaves and animal waste can go back into the soil.

In India, there are some small scale demonstrations of organic tree-based agriculture which are showing large economic success. The basic reason of which is that in organic farming cultivation expenses reduce drastically and also there is huge demand for organic products around the world right now, so the price is high. Some countries like Vietnam have made this transition on a large scale, and have multiplied their farmers' income many fold.

Agricultural products of our country are losing export quality because of lack of nutritional value. They say that our rice has only starch, no nutrients. This is applicable for all of our agricultural products. They have volume but no substance. This is due to our weak soil which is the consequence of excessive use of chemical fertilizer. This is endangering the health of our people also and is a big threat for our overall future productivity. Only organic farming can save us from this crisis in a profitable way. We can add to this the income that can come from value-added products, milk, fisheries and crafts. Also there are many ways where the economy can function around tree related products. For example, the global market for just timber, fruits and tourism is worth hundreds of billions of dollar. Companies should make use of this opportunity to contribute and benefit from it.

Irrigation through Wastewater Management

Another field where the corporate sector should intervene is wastewater management. Right now, most of the sewage in our cities and towns is dumped in our rivers and ocean. This is not only a big pollution hazard; it is also a huge economic loss. Today there are many technologies that can transform filth into wealth. Singapore has demonstrated this by turning their wastewater into drinking water. If not drinking water, we can process our wastewater to mitigate the irrigational needs of course. If we just use the 36 billion liters of sewage from India's cities and towns, we can micro-irrigate 6 to 9 million hectares of agricultural land.

Conclusion

When we think of economy, we look at the stock market and a few other things. But sixty percent of our population is in rural areas. If we just double their income, our economy will go through the roof. Today, India is sitting on the threshold of prosperity. If we do the right things in the next ten years, we can move this mass of people from one level of living to another. The corporate sector has the responsibility and privilege of using its expertise and capabilities to engineer this transformation. This is no charity. This is an investment with very substantial returns, both financially and in terms of providing millions of human being a life of dignity and prosperity.

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