As farmers marched to Parliament House to demand a special session devoted to discussing their problems and to pass Bills related to legally guaranteed remunerative pricing and freeing the farmers from chronic indebtedness, it was evident that even if these stipulations are met, it would only be a temporary fix. In this commentary on the current agrarian crisis and the policies that have been in place, Amitabha Pande, retired Indian Administrative Service officer, reflects on the working of a possible solution that could address India’s agricultural crisis.

The article suggests an “Amul plus” model that goes beyond the Farmer Producer Companies initiated by an expert panel headed by Dr Y.K. Alagh in 2002-’03. In this model, one single large farm may have multiple owners but will be cultivated as one single unit and farming decisions taken for that one unit as an integral whole. This may need further changes in law particularly as regards the shareholding structure. The objective,
Pande says, is to ensure that agriculture becomes a viable business on its own, not propped up entirely by subsidies and concessions.

Not since the heydays of Mahendra Singh Tikait and Sharad Joshi in the 1980s has India seen a mass upsurge of farmers on the scale it is now. The term ‘agrarian distress’ is now on every political commentator’s lips, and every news anchor speaks with authority on MSP (Minimum Support Price) and the Swaminathan Commission recommendations, on loan waivers and ‘farmers’ suicides’, and how all this will impact the ongoing elections.

Just last month, over 100,000 farmers converged on the Ramlila Maidan in central Delhi to march to Parliament on November 30, to demand a special session devoted to discussing their problems and to pass Bills related to legally guaranteed remunerative pricing and freeing the farmers from chronic indebtedness. The ruling establishment, meanwhile, is beginning to feel the heat. Party spokespersons are busy dusting their clichés to be able to face up to hostile and uncomfortable questions that are bound to be raised regarding promises made and not kept.

Without taking away either from the gravity of the crisis being faced by the farmers or the severity of their suffering, the fact is that all these years most discussion on the subject followed a predictable course. Wails of lament over continued government neglect, followed by plaintive appeals for more public investment, more subsidies and more concessions. We live in denial of the real crisis and keep hoping that if the Government forgets all notions of fiscal responsibility and sinks in more and more public money, the problem will somehow vanish or at least not create the kind of political damage that it has the capacity to inflict.

Given the very emotive nature of the current debate it is difficult to attempt a dispassionate analysis of the crisis and see if there are ways of looking at it beyond the mindset of government-supported prices and loan waivers. It is easy to overlook that farming is a private activity, that we live in a globalised world, that
climate change is for real and sustainability is threatened, and that there are limits to insulating agricultural activity from market forces. Yet these are challenges we must perforce confront.

To understand the crisis a little better, let us first list the known negatives. While problems are very different in each agro-climatic region some problems are common across regions. We know that with fragmentation the large majority of farm holdings are too small to make farming viable. The per acre productivity is well below international standards in the case of most crops and this, in turn, makes industrial value addition difficult. In Green Revolution areas, the high material and energy intensity of farming has depleted groundwater and degraded the soil. Government policies have encouraged wasteful and inefficient use of resources and inputs adding to costs and pushing Support Prices, paradoxically, to economically unsupportable levels.

Policies have also encouraged mindless cultivation of cereal crops at the cost of other sustainable cropping options. Growing high value crops is difficult because of missing links along the value chain and a poor logistics infrastructure. Markets are controlled by usurious middlemen/traders/financiers and there is a big gap between the price a farmer gets and the price at which an urban consumer buys. Debt burdens are high and a marginal farmer faces a generally hopeless future. Large land areas remain unirrigated and an increasingly erratic and unpredictable rainfall plays havoc with rainfed agriculture. Unseasonal rain and or drought and other extreme weather events induced by climate change have aggravated the distress to unconscionable levels.

**India's advantages**

Let us now list some of the positives. Compared with most countries, the proportion of arable land to the total land area is very high in India, which is among the largest producers of wheat and rice, fruit and vegetables, and milk. Sixty per cent of the population is engaged in farming so there is a substantial base of knowledge and skills developed over many millennia. Scientific and
technological tools are now available to build further on this knowledge base and develop decision support systems that enable farmers to take informed decisions on what to grow, when to grow and how to grow in a way that is both ecologically sustainable and commercially lucrative.

With participatory collection of large scale primary data at the micro, field level and combining such data sets with data available through satellite based systems, automatic weather stations, and ground based sensors it becomes possible to use very advanced IT tools and applications to completely transform the way site specific farming decisions are taken. Together with the use of automated, sub-surface drip irrigation and nutrient delivery systems and other commonly available technologies such as greenhouses and climate control systems, it is now distinctly possible to make a definitive transition towards 'precision agriculture'. The potential for dramatically improving yields and reducing costs is quite extraordinary. Even more extraordinary is the potential for conserving natural resources, especially water and for drastically reducing energy intensity of farming and hence the carbon footprint. The possibilities offered by organic farming have improved manifold and so has the ability to penetrate the growing market for organic produce.

The single biggest constraint in not being able to realise this potential is the unviable size of farm holdings, making it impossible either to make the investments required in capital, or technology or in improving skills and practices. A small or marginal farmer seems fated to operate at subsistence levels.

As the biggest constraint is the size of holdings, the small / marginal farmer seems fated to operate at subsistence levels.

sell out and seek non-farm occupations. Increasing the size of one's operational holdings by 'leasing in' land is limited by an individual's financial capacity. Soviet-style collectivisation or the formation of big farming cooperatives is problematic, given the history of vicious power politics around cooperative institutions such as cooperative banks and sugar cooperatives. So is there a way out of this impasse?
A way out of the impasse

There could be. Let us for a moment see the entire farmland in a village or a group of villages (within a micro watershed) pooled together as one unit of a 1,000 to 10,000 acres for purposes of planned scientific farming. Let us further imagine that all the farmers combine to form a limited company in which each farmer holds shares in proportion to the land he/she owns/ cultivates. The company is so structured that no individual or family can have a controlling share and that it is managed by an independent professional Board of Directors. Each shareholder farmer would execute an agreement with the company by which in return for a guaranteed base income (of say, Rs. 1 lakh an acre) and a share of the profits over and above the base income, he/she would give complete operational control to the company of his/her farm. The company would thus be managing a sizeable farm unit which could well run into a few thousand acres.

Once a Special Purpose Vehicle owned by the farmer/ producers has been established it should be easy to undertake three sets of interrelated actions. First engage professional expertise to manage the company and the farm, including agricultural scientists, GIS experts, agro- ecology experts and finance and marketing specialists. Second, make capital investments in three distinct areas, data gathering, data analysis and data based modelling and planning — the I.T infrastructure; farm level water and nutrient delivery management, poly houses, farm machinery etc (including the pooled use of existing assets); and, post-harvest infrastructure — storage, warehousing, grading and packing. The value of the pooled land will be more than adequate to raise the investment required.

With the investments made, the farmer owned SPV can proceed to use the most advanced scientific modelling and decision support tools to work out a farm specific plan and strategy — how much acreage to use for what purpose i.e how much for cereal crops, how much for fruit and vegetables and high value cash crops, how much for dairying or poultry etc to work out the most ecologically sustainable yet high-income generating
options. The decisions would be science-driven rather than by a herd mentality or the dictates of the government agriculture extension bureaucracy.

Once a plan has been prepared it would be easy to work out the technology options for irrigation, soil treatment, nutrient supply, pest management specific to the needs of each land parcel and each crop to achieve the maximum productivity gains. State of the art infrastructure for storage and grading and packing, which would be a part of the investment made by the producer company, would enable the producer company to wait for the most opportune time to sell as well as add value to the produce and substantially reduce wastage costs.

The farming company will have a number of options for further value addition through industrial processing, product packaging, branding, marketing and selling. These could be taken up by the producer company itself although this would be beyond its core competencies. Ideally, back to back contracts with big organised retail and major food processing industry players through a lucrative transfer pricing arrangement would be a better option as it will mutually reinforce each other’s strengths. There are many successful experiences of such back to back arrangements and these can be built upon. The simple point is that by coming together, producers are in a vastly superior bargaining position and need not have to accept the subordinate position they presently hold in their relationship with processors and marketers.

There is the question of what role the Arhtiya and the Mandi whole-selling agent/financier will play? The best option is to co-opt them as shareholders in the producer company and have them buy into the post-harvest marketing operations. They could also simultaneously be co-opted by the big retailer or the industrial processor as buying agents. They would thereby stand to benefit substantially from the value addition process and thus not be a stumbling block. At the same time, their understanding of the farming community as well as of the big buyers could be of great advantage both to the producer and the marketer/seller.
The farmer-owned company will also be in an advantageous position to work out direct backward linkages with agricultural research. The company could sponsor R&D of direct relevance to its production plans, provide space and facilities for pilots, demonstration, multiplication so that R&D comes out of the confines of a lab and has a chance of being scaled up.

**Earlier experiments with Farmer Producer Companies**

The idea of Farmer Producer Companies is not new. It was, in fact, initiated by an expert panel headed by Dr YK Alagh\(^1\) which in 2002-'03 successfully piloted an amendment to the Companies Act 1956 to make a specific provision for 'producer companies'. The objective was to improve the bargaining strength of the producers in the market through collectivisation much in the way that the milk producers’ cooperatives had done in many parts of the country, especially the Amul experience. The idea was to retain the spirit of these cooperatives and add to it the efficiencies of a professionally managed corporate organisation — an Amul plus model better suited to a more market-oriented order.

An *Economic Times* story of September, 29, 2018\(^2\) reports that about 3,000 FPCs have been set up by NABARD, Small Farmers' Agri-Business Consortium or individual initiatives, since the Companies Act was amended in 2002-'03. Most of these are said to be engaged in the sale of agricultural inputs to farmers, or aggregating the produce of individual farmers and marketing them. Only a handful are reported to be financially viable. A few, like Sahyadri Farms in Nasik have achieved noticeable success in growing and marketing a commercially lucrative crop like grapes for the export market. Most FPCs are crop specific with the primary focus being on achieving better market linkages through an institutional/organisational form which has many advantages over the traditional cooperative.\(^3\)

**Going beyond the FPC model**

The proposal made in this article, however, is significantly different. The focus is not merely on finding a new organisational form for introducing professional management skills, but on changing the way in which farming is done.
There are three critical elements to that. First is to overcome the problem of unviable farm sizes by pooling the land resources of multiple owners into one large viable unit without anyone having to alienate the land and losing title. So instead of a hundred farmers doing their own thing in their own farm and desperately trying to make it viable, the idea is to have one single large farm which may have multiple owners but is cultivated as one single unit and farming decisions are taken for that one unit as an integral whole. Second is to use the advantages of scale to invest in and apply knowledge-based tools for decision-making with the multiple objectives of optimising water and soil resources, reducing energy intensity, increasing productivity and incomes very substantially. Scientific and technological advances can be used only if the farm size is large enough. The third is to leverage the value of a large farm to invest in dedicated farm-specific infrastructure — pre-harvest, harvest and post-harvest as relevant to the specific conditions of the farm.

These go beyond what the existing FPC model envisages and may need further changes in law particularly as regards the shareholding structure. There are tricky issues here especially in situations where farm owners are not the cultivators and the cultivators do not have ownership rights. Specific solutions would have to be found in each region given the diversity in ownership patterns and the nature of relationship between a non-cultivating owner and the cultivator tenant. However, all these possible niggles in implementation can be ironed out if a set of pilot projects in different settings are taken up as proof of concept.

The objective of this discussion is to stress that solutions to the agrarian crisis cannot be found within the existing mindset of providing more sops and subsidies and that unless agriculture becomes a viable enough business on its own and restores to the farmers the dignity of being productive members of society who earn the benefits of the value that they add, not mere recipients of benefits painfully extracted and even more grudgingly granted by a heartless government, the crisis will continue. Governmentality kills.

Solutions cannot be found unless agriculture becomes a viable business and restores dignity to farmers.
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