



Agrarian Crisis –The Root Cause and The Likely Solutions

M. S. Kairon* and Ramesh Thakare**

* Former Director Central Institute for Cotton Research (ICAR)

Kairon_m_s@rediffmail.com

** Ex- Farming System Advisor to World Bank (UNESCO)

rameshthakare8@gmail.com

Agriculture is the backbone of Indian economy. Two third population of the country directly or indirectly depends upon agriculture and agriculture still contributes 16.6 percent to the G.D.P. As against the 8% growth rate in industry, the agricultural growth rate is below 2 percent and from 1997 onwards around two lakh farmers have committed suicide for reasons directly or indirectly related to agriculture. A large number of farmers and landless farm workers are leaving villages and migrating to cities in search of alternate livey-hood.

The Government should recognize that some 62 per cent of Indians derive their total sustenance from agriculture or related activities and that some 70 per cent of India lives in its villages; food security, agricultural security, farmers' security and security of rural sector are, therefore, synonymous. Today there is a total crisis in agriculture and some important factors which are responsible for this dismal state of agriculture sector in India are discussed here :

Representation in Policy :

Indian agriculture sector is the most unrepresented and unorganized sector. Indian Agricultural Policies are often made without proper consultations with the primary stakeholders i.e. the farmers and the landless farm workers. After independence, a network of agriculture universities and research institutes were setup under Indian Council of Agricultural Research (ICAR), DARE, Ministry of Agriculture.

It was mandatory for these academic and research institutes to impart teaching, pursue research and provide extension services in agriculture. These institutes automatically got the honour of advising the government in making policies concerning agriculture. At present, in these institutes, the majority belongs to general category and the representation of SC/ST/OBC and minorities is less than 15 percent.

It is also no denying fact that majority of the workforce, whether farmers or landless farm workers, belong to SC, ST, OBC and minorities. This contrast between two communities, one comprising farm force and the other comprises

intelligentsia make them two distinct interest groups and now-where their interests, even to slight extent overlap. Moreover these two groups are culturally different also. In the group of policy makers, majority hail from such communities where touching the plough is considered taboo and agricultural practices or animal husbandry are considered works below their dignity. Such a group of can not be expected to advise government in making farmer friendly policies or to work whole heartedly to ameliorate the plight of farmers. This could be the major reason for the present state of affairs driving farmers to extreme state of distress.

Seeds:

Loss of seed sovereignty after the seize of the Indian seed market by Multinationals. Today more than 90% the seed market in Bt hybrids, substantial portion of maize seeds, vegetable seeds to name a few are controlled by multinationals. The erosion of cotton seeds from public sector (because of the absence of Bt gene) is causing a near monopoly, leaving the farmers at the mercy of seed companies. Despite paying exorbitant price, farmers do not have any assurance that the hybrids they are growing are actually suited for their agroclimatic conditions or not or whether they are resistant / tolerant to diseases and pests (other than bollworms). The quality of seeds is also questionable. A poor crop due to poor seeds leads farmers' to mental distress leading to crisis.

To ensure livelihood security, it is an imperative that seed business is entirely in the hands of India alone.

Chemical Fertilizers :

In the year 1967, the then Prime Minister Smt. Indira Gandhi imported 18000 tons of hybrid wheat seeds from Mexico. These high yielding varieties which heralded the green revolution in India, required chemical fertilizers to give maximum yields. In those times, farmers were unable to afford chemical fertilizers. In spite of giving cash or vouchers to millions of farmers, government paid subsidies to fertilizer manufacturing companies to keep fertilizer prices

at farm gate affordable. Government compensated the companies in the form of subsidies to make up the differences between the production price and sale price and to give the companies 12% return on equity investment. Now fertilizer manufacturing companies were setup and these started making huge profits by taking advantage of subsidies.

In 1991, the Government tried to eliminate the subsidy but fertilizer companies lobbied to retain it and they won in retaining the subsidy on urea, while subsidy on phosphorus and potash fertilizers was eliminated. The consequence was the imbalanced and over use of urea which made the soil deficient in other nutrients, and in many states agricultural productivity started declining. Poor farmers who could not afford to apply P, K and other nutrients were hit hard by the lopsided fertilizer policy pushing them into distress. Overuse of urea also pollutes underground water.

Overlooking these disadvantages, there being assured profit in the manufacture of urea, in India fertilizer manufacturing companies are producing 80% of the total urea required while only 33% of the total requirement of phosphorous based fertilizers are produced. Potash based fertilizers are not produced in India, are 100 percent imported. Farmers as well as common people are suffering due to overuse of urea while companies are making profits.

Here very important point to be noted is that one lakh crore subsidy on chemical fertilizers (exclusively urea) is not a direct subsidy given to farmers, it is indirect subsidy given to chemical fertilizer manufacturing companies.

As alternative to chemical fertilizers, manufacturing companies, politicians and government officers don't want the farmers to switch seek to organic farming. Agricultural scientists are busy in studying the health hazard, environmental pollution and soil degradation caused by overuse of urea and in optimizing the doses of urea or different crops under different climatic conditions and soil and are satisfied with their achievements. The plight of farmers who are the ultimate beneficiaries are secondary in these studies.

Chemical Pesticides:

In India, chemical pesticides like insecticides, herbicides, fungicides, rodenticides etc. worth huge amount are applied annually for the protection of crops. Insecticides make up the major share of 76 percent followed by herbicides 13 percent. During the initial phase of their use, pesticides had been efficient in protecting crops and thereby increasing crop yield but in due

course despite increasing usage of pesticides, the benefits started dwindling.

First, induced crop losses started rising as a result of pesticides associated disadvantages like development resistance in plants and harmful effect of pesticides on non target organism leading to reduction in population of beneficial insects like honey bees and reduction in soil fertility.

Other negative effects of pesticides included - impact on human health through food commodities which contain accumulated amounts of pesticides causing cancer, neurological disorders, organ failure e.g. kidney's failure is increasing day by day, impact on environment due to persistence of pesticides in environment thereby causing threat to birds, fish and other beneficial species, contamination of soil, surface water and ground water. It is not the case that use of pesticides is not avoidable.

The practice of monocropping and use of chemical fertilizers make the crops more susceptible to pest attack. If chemical fertilizers are replaced by organic manures and multi-cropping practice is followed, those will not only reduce the dependence on pesticides but will also help in increasing the yield also.

Moreover alternatives to chemical pesticides like biological control and bio-pesticides are not popular among farmers.

Crop failure due to pest resistance is one of the major factors compelling farmers to commit suicide but the scientist unmoved by these incidents are gaining solace and satisfaction in studying persistence of pesticides in soil and water or optimizing the doses of new chemical pesticides for different pest and the impact of pesticides on soil fertility and environment.

Tractors:

Tractor are projected by tractor manufacturing companies as a boon to agriculture but actually tractors are proving curse in disguise to farmers in India by eliminating draught animals which had multiple benefits, 80 percent farmers have land holding less than 4 acre. Owning a tractor is viable only if the land holding is more than 40 Acres. For small farmers even tractor hiring is not viable.

Draught animals are alternative to tractors even in some developing countries, draught animal assisted agriculture is in practice the use of draught animals will reduce import of petroleum. Dung obtained will be used as farm yard manure thereby decreasing the use of chemical fertilizers, Draught animals will also be helpful in transporting farm produce and other commodities.

To make use of draught animals in transport, government has to include the component of farmer friendly and cart friendly road design that may assure farmers to use their cart for transportation without being interfered by the even increasing traffic. The money spent on draught animals and carts will circulate in local communities. This will generate employment to local population and will make village communities richer. But this is not happening.

Marketing of Agriculture Products:

Marketing of agricultural produce is an integral part of agriculture. It is not favourable to the farmer. In 1950-51, 11% of the total cost of farmer produce went to middleman and 89% was obtained by farmers.

Today farmers get 34% of the total cost of their produce and 66% goes in the pockets of middlemen this accounts to huge amount of 20 lakh crore rupees. This amount is for greater than the total sum of subsidies, loan waiving and other expenditures made by Government for the welfare of farmers. Crores of farmers are becoming poorer day by day and middleman comprising mainly few lakhs businessmen are earning huge profits and are getting richer and richer.

Minimum support prices are not commensurate with the cost of production of farm produce, further pushing the farmers to poverty. Often, when the prices crash, Government machinery is not geared up to purchase farm produce at the support price, leaving the farmer at the mercy of middlemen.

International Trade:

International trade is not in favour to the farmers of developing countries. The depression in farm prices globally is attributed to global trade and the subsidies granted to farmers in developed countries. Many developing countries are refusing to abide by the demands of agreement on Agriculture Country WTO but over polity still support global trade.

Global trade developing countries are not in offensive tradition. If India intends to import farm produce in substantial amount, developed countries raise the prices but what it is turn of India to export due to farm subsidies price already depressed.

If developed countries have surplus produce they try to dump that, it further worsen the condition of farmers. For example while India imported about 8 million bales of cheap American cotton between 1997-2004, local market was affected badly and consequently 40000 farmers committed suicide in Maharashtra alone during this period.

Loss of Crop diversity and monoculture

Irrespective of the size of holding farmers in the past used to cultivate a number of crops in his farm. Crop diversity used to insure the farmer against total crop loss due to unprecedented factors – weather, pest or price related. It also used to provide, food, feed and other essential needed by the household thereby reduced the dependence on outside market. Crop diversity also ensured biodiversity in the ecosystem.

Of late the genetic diversity of crop base has reduced making them vulnerable to natural disturbances and climatic observations. The pursuit for more income, forces farmers to grow more cash crops often result in a monoculture system devoid of diversity. When ever this crop fails or the prices crash, farmers are left in lurch with no risk averting crop to rescue. On the same lines, loss of diversity in farming enterprise is causing high risk associated with one or two farm enterprises. Crop failure or enterprise failure pushes the farmers to extreme agony.

Some other causes include seasonal nature of agriculture, adversity of monsoons, reduced public investment in agriculture and growing privatization (of input industry and market), non-availability of institutional credit, opening up of agricultural sector to globalization, delay in extending irrigation facilities, absence of Mental Health Programmes at primary level for counseling vulnerable farmers.

After critical analysis of the above factors, it may be concluded that for present pitiable condition of agriculture sector our politicians, agricultural scientists and middlemen and officers are responsible and that the plight of Indian Farmers and Landless farm workers can be improved if the nexus between traders pesticides, chemical fertilizers and tractor manufacturing companies, businessman class, selfish politician, officers is broken and former are convinced to follow multi cropping and draught animals assisted agricultural practice with minimal use of chemical fertilizers and pesticides.

Solution to Agrarian crisis

The agrarian crisis forcing farmers to suicide are a result of a complex interaction of socio-economic, political and environmental constraints mentioned above. The solution lies in thoughtful interventions aimed at regaining faith and confidence of the farmer in the system. Vulnerable farmers need locally suited but modern farming techniques, constant monitoring, sound counseling and support system during the recovery phase. Transparency in provision of relief measures is another issue. The answers call for some bold decisions by policy framers, agricultural scientists, administrators and civil

society. It should be borne in mind that there is no single solution to end the woes of vulnerable farmers. Some solutions to reduce the vulnerability of farmers include.

- 1.Reducing the dependency of farmers to the vagaries of monsoon by smart climate proof agricultural technologies. This will prevent crop failures.
- 2.Saving the farmers from money lenders by making institutional credit available at affordable interest rates will save the farmers from immediate debt traps. There is a need for a local institutional machinery to ensure that farm loans reach the targeted small / vulnerable farmers for the intended purpose.
- 3.Consolidation of land and cooperative or contract farming can to some extent improve the economies of scale. Farming will be more economic, mechanization would be possible and market for the produce will be assured.
- 4.Improved agricultural technologies should be validated and transferred to the needy farmers. The approach to agriculture should be a cautious mix of tradition and modern science. Scientific contingency plans are available for many of the weather related exigencies – drought, flood etc. Material support is often lacking to implement them. Support systems like seed banks, cattle fodder banks, animal shelters etc. should be strengthened at village level to support vulnerable farming groups.

- 5.Soil health is one of the top most priority to maintain and to improve the soil health by utilizing farm waste and compost
- 6.Diversification of farming system to provide alternate sources of income is essential. Training to acquire new skills, finances to set up integrated farming systems, markets to support a variety of outputs produced, if provided, will reduce dependency on crops as a sole source of income. Ultimate solution lies in enabling farmers to sustain on their own. Enhancement of skills and provision of opportunity is the responsibility of the Government, NGO's, scientists and civil society.

Action Plan :

To implement the above suggestions, it is necessary that an action plan is prepared with the involvement and active participation of all the stakeholders. A micro-level planning is needed, be it at a village level or the next higher level. The Krishi Vigyan Kendra can be empowered with the responsibility of being the agent of change. Each KVK can identify a few most vulnerable villages. The next step would be to prepare a base-line survey to understand the present status of human, animal and natural resources available. A detailed analysis of the rainfall pattern, animal resource available, small scale industry / cottage industry, available crops grown and their productivity range, soil types and their characteristics. Using this information and with the active participation of the villages, the KVK should develop a micro – level

