

ALLEVIATION OF RURAL POVERTY

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Improvement in Agriculture.

More than 50% of people live in rural areas and more than 90% of them are involved in agriculture directly or indirectly by providing services to farmers. The services include all artisans, technicians, and transport, all or which cater for farmers requirements. The present trend of advancing small loans to those categories of artisans and technicians, does not resolve the issue, as in rural areas all artisans and technicians work less than normal hours each day, due to lack of work and they are part time unemployed in disguise. By adding more people in the same fields we will increase part time unemployment. Those who migrate to cities for employment face many socio-economic problems in adjustments and find it difficult to adjust. The solution lies in improvement of agriculture, increase in yields and income. Below are a few suggestions for alleviation of rural poverty.

- (i) Rural poverty can quickly and easily be reduced and only by switching from field crops to horticultural crops like; fruits, nuts, vegetables, floriculture, herbs and spices, as they can employ five times as much labor as field crops.
- (ii) Improving cropping patterns by introducing value added new crops and preferably horticultural ones, which give very high returns.
- (iii) Returns from horticultural crops are many folds those of field crops. Intensive horticultural cropping can increase income 5-10 fold and employ more people.
- (iv) Producing crops primarily for export.
- (v) Improvement in agriculture is not possible under the present mismanagement of agriculture by uneducated Kamdars. The land owners have to engage educated farm supervisors.
- (vi) Special courses for training of farm foremen, farm supervisors and farm managers should be started in private sector, to overcome short comings of Kamdars.

- (vii) Libraries at Agricultural Universities and colleges lack proper and latest literature in agriculture text books, journals and bulletins and this has resulted into lowering of quality of agriculture education, leading to deterioration of agricultural extension, research and education. Consequently our yields are only 30-33% what they are in developed countries and this obviously in cause of rural poverty.
- (viii) Present Agricultural universities and colleges due lack of proper education have increased the number of un-employable, and need revolutionary changes to meet the requirement of extension and research.
- (ix) Introduction of private sector extension service on experimental basis may be tried and started in one district, specially for horticultural crops, and may be the solution.
- (x) Private sector agriculture research may be encouraged specially for introducing new crops and development of genetic banks.
- (xi) Starting a post-harvest training institute in private sector, to train growers, marketers, exporters and farm managers.
- (xii) Mechanization of vegetables to increase area under them, reduction in costs of production and employment of more people for handling of larger crop.
- (xiii) Establishment of packing plants for export of fruits and vegetables.
- (xiv) Encouraging of women as daily paid labor on private horticultural farms.
- (xv) Mechanization of row crops like cotton, castor, ground nuts and vegetables.
- (xvi) Improving harvesting methods.
- (xvii) Extending harvest season of horticultural crops by introducing new cultivars.
- (xviii) Reducing harvest losses of crops, which are 10-15% in field crops and 50% in horticultural crops.

- (xix) Development of disease resistant crops, to reduce losses to diseases etc., and premature crop.
- (xx) Rural to urban migration in search of employment, causes many social problems, leading to extreme poverty, misery and psychological problems and this has to be handled properly.
- (xxi) Price fixations of agriculture products by the government and marketmen is wholly irrational and exploitation of rural population.
- (xxii) Intensifying agriculture for high yields and high returns.
- (xxiii) Employing women on the farms for suitable operations.

Farm Chemicals.

- (i) Cost of nitrogen per unit weight is on the increase and is more than extra income from agricultural produce by its extra application. This has caused reduction in agricultural income and rural poverty. The same is the case with phosphates, the natural sources of which are reducing day by day and cost keeps rising. Nitrogen has to be obtained by introducing legumes in crop rotation and rhizome for extraction of phosphates from root zone in available form, for economy as well as health of soil. They also increase yield of crops following legumes and rhizome.
- (ii) With approaching exhaustion of natural gas world over, energy prices will go up and switching over to ammonium fertilizers from gas to coal will cost three times as much, as at the present.
- (iii) Presently micronutrients are not used in agriculture except by a few well educated farmers on fruit crops. Micronutrients can easily increase yield by 25-30% and thereby decrease rural poverty to some extent.
- (iv) Herbicides are costly and from soil they enter ground water. Amount of residual herbicides varies from 2-16% in ground water and 5-16% in the soil. They kill soil fauna and degrade soil. Yield of crops on this soil reduces year after year and more and more fertilizers have to be used.

- (v) Instead of herbicides, other inter-cultivation methods and mulching may be introduced to protect soil and ground water.
- (vi) All fertilizers, herbicides and pesticides kill soil fauna. Their use must be reduced. USA has reduced it by more than 60% in past 20 years. We in Pakistan have multiplied it many folds.
- (vii) All farm wastes can be composted and more economically than any other uses. This technology is to be introduced on large scale to save costs on fertilizers, improve soil health and increase yields.
- (viii) Sindh soils are deficient in zinc due to rice cultivation for nearly 4000 years. Zinc sulphate available at cheap rates from NFC FACTORY AT Daharki., is no longer available. Its application can increase yields by 10%. Imported zinc costs four times and is uneconomical.
- (ix) Of all 225 chemicals standardized by the Government of Pakistan for import, 30% are banned for use in USA and UK, but are allowed to be manufactured and exported to the Third World Countries, in the name of free trade. They cause serious health problems in rural areas, downtime, diseases and their treatment costs and thereby rural poverty.

Poverty Sector.

- (i) No appreciable seepage takes place from watercourses, minors and canals, but most of it is from fields, as does applied are in excess of water requirements of crops or even evaporation. Seepage losses of water vary 30-50% in various months of year. This has to be investigated as lining of canals and water courses may not be necessary.
- (ii) Precision land leveling is must and agriculture department has to be geared to it. The operations can be started by private sector. Industrial wheel type tractors of 150 H.P., with laser operated dozer blades are most satisfactory for the purpose. Present equipment with the department is; wrong size, wrongly fitted and cumbersome to operate.
- (iii) Drip and sprinkler irrigation are uneconomical under the present price structure of agriculture commodities in Pakistan and can be successful in selected areas like Karachi, where water is scarce. Only 1% area in

USA is under drop irrigation, mainly due to high cost of water and its shortage.

- (iv) Efficient but simple and cheap irrigation water applications have to be evolved.
- (v) New methods of field irrigation to reduce water use may be introduced.
- (vi) Much publicized rain water harvesting on a large area does not increase precipitation, except to deprive one area of rain and have it in other area. Such experiments for past 50 years in USA, have failed totally.
- (vii) Double cropping is misleading and fallacy. It reduces yield of both crops. Growing field crops in an orchard reduces yield of tree crops as well as of inter crop. The total income is less than mono crop of trees.
- (viii) Adopting major crops to row cropping and making ridges and furrows for them may save water by 25%.
- (ix) Introducing new crop and cultivars, needing less water is one of the solutions.
- (x) Introducing genetically drought resistant crops is another solution.

Reclamation of degraded lands.

- a) Degraded lands need reclamation such lands form 30% of area in rice zones. In rest of Sindh water logging has put 30% land in disuse. The reclamation will increase area by 43%.
- b) Abandoned land in Thatta district near the river bank has to be reclaimed by stopping tide water from reaching Sujawal bridge. It will envisage a tail-end barrage.
- c) Stopping agriculture land from conversion to towns and city settlements may be discouraged.

New crops.

- a) Mango season in Sindh can be extended from the present 8 weeks i.e. 20th May to 15th July to 6 months i.e., from 15th April to 15th October and this may be given top priority.
- b) Developing of salinity tolerant crops and cultivars.
- c) Breeding for stress tolerance due to salinity, drought, frost, wind and occasional heavy downpours.
- d) Sugar beet a temperate zone crop growing between 45-61 N and 40-50 S, does not suit Sindh and the Punjab. Its yield and sugar content will be low and sugar production from it will be totally uneconomical.
- e) Development of cultivars for pest and disease control is essential need, in view that pesticides besides being costly, injure soil, pollute ground water and create serious problems of human health.
- f) Spending on coconut and palm oil is waste as under saline soils and water logging will have poor economy and their yields will be poor. Samphire failed in Sindh due to use of drain water in place of sea water. In Sindh Simaruba glausa or acetone fruits properly, but its economics are still not known. It can be tried in various parts of Sindh and Punjab. It does not need processing mills and oil can be extracted by ordinary expellers.

Negligence of Natural Resources.

- i) Pollution of natural resources of sea and destroying fragile land of desert area by the government and the rich in the hope of development has deprived poor fishermen and animal husbandry folks of their lively-hood. The policy needs full revision.

Taxation.

- i) Agriculture income tax should be based either on area or total income and not on both. This makes agriculture to pay more than other sectors.

Forestry and range management.

- a) Harvesting of rain water for range management.

- b) Introducing of new forest trees and shrubs for desert area.
- c) Conservation of run-off water for raising grasses, bushes and trees.

Land Tenure.

- i) Inherent defect of Zamindar-Hari system of cultivation is low productivity, as it is not geared to optimizing of labor efficiency and output, per unit of land and water.
- ii) Zamindar-Hari system is manageable only for convention filed crops needing low technology, low supervision and low returns per unit of land and water. There is no incentive for higher yields in the system.
- iii) Daily paid labor earn more money than tenant cultivator for raising the same crops under similar conditions and tenancy act has tot be looked into, from this angle.
- iv) Employment opportunities per unit of land are more in self cultivation of value added crops and therefore, reduction in rural employment and poverty. The returns to the employer are also more.
- v) Self cultivation can easily lead to switching over to value added crops, higher returns and more employment.

Mechanization.

- vi) Mechanization of all farm operations like seed bed preparation, planting or drilling fertilizer placement, inter cultivation and spraying for pest and disease control are more economical than present manual or animal operations or use of herbicides.
- vii) Harvesting of some crops specially root crops is more economical than manual or animal power. Field losses are also less with mechanization. Mechanization is opposed in the name of un-employment which is a fallacy. Mechanization will increase yields, generate more income and employ more people.