

Socioeconomic Policy considerations for Sustainable Agricultural Development & Food security In Bangladesh: An assessment

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Socioeconomic and Policy considerations for Sustainable Agricultural Development & Food security: In Bangladesh

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Introduction :Agriculture is a main sector of supplies food and employment .Most of the people in Bangladesh is involved in Agriculture ,,they depend on it directly or indirectly . for increasing population the country has to produce more production may be increased. It needs appropriate and sustainable technologies and better practice. Bangladesh needs new dimension and technology for increasing food production. To devise Sustainable solution to increase agricultural production cropping system and technology development is necessary, it is a need of behavior of agro -eco system which together describes productivity , stability, sustainability and equitability .Due to rise in food prices , food securityis becoming a number of challenges, .This is a one of the major concern of Bangladesh. Lack of sustainability may be indicated by declining productivity but equitability of productivity of the agro system is distributed among the human beneficiaries (Conway10831985a). The study reviews the Socio economic and policy consideration for Sustainable Agricultural Development and Food security in Bangladesh .

“Sustainable development is development that meets the needs of the present without compromising to meet their own needs” (World commission on Environment Development (1987) . It means to increase productivity to compensate for the loss of natural resources to meet the future needs ,it will achieve sustainable productive capacity through research and technology .

For sustainability of Agricultural Development , it needs an Agricultural development strategy that will enhance productivity and food security.

2Policy Consideration

For critical socio economic consideration ie poverty , externalities ,input use,,market and policy failures are considered .

a.Poverty: Poverty is most common factor of environmental degradation in low income countries . some poverty reduction strategy recognizes the importance of satisfying the immediate need for food addressing long term development goals

Regulation & Land planning in this regard that conflicts the poor;s survival strategies , it is difficult to enforce .

b,Externalities : Externalities resulting from inadequate property rights are of particular importance,poperty rights to land, water forest in this case regulation may reduce exploitation but enforcement is difficult .and expensive. with common property, Govts effort will be how best to achieve sustainability goals .

c .population growth : excessive population pressure create degradation of land and deterrent factor to alleviate poverty and efforts will be made to achieve sustainable agriculture and food security

d. Productivity &Input use :Low inputs- Agriculture creates low productivity. Growth in agricultural productivity and higher income profits , the rural poor can generate additional income to purchase more food including diverse kind of food

e. Market & policy failures: Removal of Govt .monopolies in input output market and others right policy will enhance sustainability in agriculture and food security while reducing poverty .presently state intervention in input output market is being replaced by private sector

3.Agricultural Planning &Techniques in Bangladesh((Agronomic Measure)

Farmers cultivate of different types land and grow several crops within their village and so have detailed knowledge . The following area needs to be discussed

a. Draught tolerance crops and varieties : It should be kept in mind that opportunities for growing dry land crops are Maize, Soyabean,Sorghum, Kharif Pulses and oilseeds are less adopted to the water parts of the country.

b. Alternative crops and rotation: when rains start late are intrupted by draught

c. Cultivation techniques :What practiced are used for conserving soil moisture these are the consideration :

- -Deeper plowing ,.needs assessment or periodic hand cultivation
- Rotation –deep rooting crops
- Weeding and harrowing
- Mulching increased use of organic chemical
- Proper maintenance of field bunds in aman fields

d.Planning Tecniciques

4. Planning techniques : what practices are used in ‘normal and in sub-optimum or emergency situations ? e.g.

- soaking and pre-germination of seed so as to ensure rapid crop establishment.
- dibble-sowing or line sowing of seed (followed by planking to press seeds firmly into contact with moist soil) ;
- minimum-tillage or no-tillage techniques , such as dibble-sowing rabi crops directly in to the stubble of a previous paddy crop ;
- transplanting instead of direct-seeding aus and deepwater aman.
- ‘dry transplanting’ aus or aman (including transplanted aman) seedings into the moist but not puddle topsoil of permeable soils that are not normally considered suitable for transplanting, thus reducing the time that aus is in the

field; for transplanted aman, this practice increases weeding costs , but it would leave the topsoil in better condition for sowing a dryland rabi crop after the aman is harvested ;

5. **Drought –recovery techniques** : e.g. gap-filling , crop substitution, ‘boster’ fertilizer applications, after drought ends.
6. **Irrigation** : it is anti- dote for drought. According to local circumstances irrigation might be provided by low lift shallow,hand pumps,deep tube wells, treadle pumps, rower pumps or indigenous devices
7. **Fertilizer application** : Research studies are particularly needed to find out the most efficient and economical methods of applying fertilizer on drought-prone soils. It should be kept in mind that such soils may also suffer rapid leaching and waterlogging during periods of excessive rainfall. Amongst the techniques deserving to be tested are the following :
 - fertilizer placement techniques : e.g. application in the furrow during last ploughing ; dibbling ; mud-balls;
 - use of urea super-granules, sulphur-coated urea, granular TSP ; and
 - use of fertilizer in combination with additional amounts of manure ; the latter should be properly composted and ploughed into the soil immediately after it is carried to the field, preferably not more than two weeks before a crop is sown.

8.**Tree crops** : also deserving study is the cultivation of suitable quick-growing trees and bamboo for use as fuel wood. Fodder or polewood. Species which can also tolerate temporary wet soil conditions should be selected because even the highest floodplain ridge soils can become waterlogged or have a high water-table during periods of excessive monsoon rainfall

The above and following area can be developed to ensure sustainability of agriculture development .

4.Development of Agriculture

- i. Diversification Crops
- ii. Integrated crop production technology
- iii. Quality Seed
- iv. Provision of green manure
- v. Balanced Fertilizer
- vi. Development of agriculture in Chittagong hill tracts
- vii. Development new cropping system
Integrated Pest Management
- viii. Infrastructure development
- ix. Maintain ecology
Increase forest not destroy
- x. Protect fertile land
- xi. Development of irrigation
- Xii..Replacement of old variety by new variety

Agriculture in Technological development changed changes in output and we need food security .

5.Food Security

This is defined Food security as availability of sufficient food and choice of all people at all times with necessary purchasing power.

Main aspects for increasing of food security

This will ensure food security

- i. Price stable
- ii. Adequate nutrition from food intake
increase of output ,increase purchasing power
- iii. ensured accessibility of the poor to feed
- iv. Adequate buffer stock
- v. Adequate food supply
- vi. Efficient food distribution through a policy production of inputs
- vii. 17- 18 % food stock from total stock
- viii. meet up food demand
- ix. increase production from limited resources
- x. Hibreed and Genetic engineering through research
- xi. Grow own capacity build up and reduce international assistance
- xii. Produce more Mango Lichi , Vegitables
- xiii. Incentive offer for low income group to ensure poor beneficirires
- xiv. Minimize risk
- xv. Engagement of women
- xvi. Preventive measures from climate

Conclusion :These Policies should focus on compensating the poor farmers, high discount rate, reducing for the risk and uncertainty with which they are faced, compensate for poorly functioning land markets and provide information to assist farmers in avoiding large errors in their expectations regarding future land and output prices (Andersum-2001)

A concerted effort to improve policies and increase investment in agriculture could reduce poverty and able to the MDG target of 50 %)

The main policy Message is that Sustainable Agriculture , based on Biodiversity and including Agro Ecology, organic Farming is beneficial to the poor farmers needs to be supported by Policy and in case of food Security , Price stable , hybrid and Genetic engineering through research, Adequate nutrition from food intake, Grow own capacity build up ,Preventive measures from climate ,increasing purchasing power , Engagement of women, market are the issues for achieving food security in Bangladesh .

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