

Sustainable development principles for agricultural activities

Editorial

One of the important principles of sustainable development is to preserve valuable resources for future generations. Agriculture as one of the main consumers of natural resources plays an important role in the attainment or non-attainment of sustainable development. There are many definitions of sustainability in agriculture, but the important thing common to all these definitions is remarkable in three dimensions: economic, social and environmental. Take agricultural development programs in the world clearly shows that this well has been studied theoretically, but in practice nothing has happened in many cases. Globally, development happens when all people benefit from the benefits of development.

From a global perspective, the progress made in the development occurs, when it affect the livelihoods of all people positively and comfort all those who are involved in the production cycle, not only led to an increase in total gross income. Equity in income distribution, with special attention to those who are involved in production cycle, is an important principle of achieving sustainable development. Agriculture also is not an exception. In simple terms, it means that even if agriculture someday replace oil revenues in a given country that its economy is oil-dependent, but farmers do not reach the standard subsistence standards and doesn't feel welfare, the world looked to the sustainability of the system is not in motion. In wealthy countries such as Australia, Denmark and France and developing countries such as Pakistan and Thailand, farmers have above average income and in many European countries, farmers are the most affluent segments of society, while the growth and profitability of agricultural activities in each of these countries compete with profits from industrial activities. While in many other countries this is not true and farmers' per capita income is lower than the average. So if a country's level of development in the field of agriculture and natural resources is going to assess, it is necessary to met economic, social and environmental issues. From a global perspective, the first principle to attain an economically sustainable system is that the net income of farmers will be added over time. Also, the family debt is consistently going down, all farmers' investments will be consistently profitable from year to year, the dependence on external inputs (such as chemical fertilizers, insecticides, herbicides, fungicides etc.) will be reduced and reliance on government subsidies will be reduced or will eliminate. Agricultural systems when can take steps towards sustainable development that will generate employment. Also an agricultural system to achieve sustainable development must also create other jobs related to agriculture (provide or aid other businesses and families in the community).

Also in sustainable agricultural systems, money will flow in local markets and the number of farmer families increase or remain constant. In the best societies, migration is done from cities to villages and investors tend to focus their investments in the villages rather than cities. This is where the role of rural development looks essential for achieving sustainable development. In the course of sustainable development, youth tend to stay with their parents and continue farming. Unfortunately, due to lack of profitable agriculture in many

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underdeveloped and developing countries, the rural population have been left the villages and arable lands have become as barren lands.

Also from the perspective of sustainable development, graduated agricultural students should return to society after graduation and contribute to the production cycle. In fact, lack of attention to social aspects such as creating jobs for farmer's family and other those persons are dependent on the agriculture sector, creating local markets, preventing rural migration to the cities and to use the agricultural experts could lead to a weakening of the production cycle.

From an environmental standpoint, the sustainable development is achieved when there is no land without coverage, water in all streams is clean, biodiversity is rich and production wastes are recycled again. In this case, non-point source pollutants are one of the most important worrying issues that could affect human health.

So for sustainable development in agriculture sector, three important components of the sustainability triangle i.e. economic, environmental and social aspects should be considered.

To be successful in three aforementioned aspects, the following suggestions are available:

- i. People-oriented planning in all agriculture activities, especially scientific designing of cropping patterns to create new jobs and new opportunities for farmer's families. Also, considering those rotations which will distribute labor force during each growing season.
- ii. Integrating small agricultural lands to larger lands. In this case, the cooperative farms must be kept by the families of farmers and government subsidies should be allocated to technological support to farmers.
- iii. To alleviate environmental concerns, alternative managements should be studied and land use planning for agricultural activities in the first step and alternative agricultural activities in the second step should be done.
- iv. Full identification of those resources which are exploited by agriculture activities to precise determination of input demands in each given farm using new technologies such as remote sensing and GIS.

- v. Rural development should be the first priority in policy makings and production cycle should be strengthened by increasing the rural working population.
- vi. Extending indigenous-knowledge based technologies to alleviate farmers costs, preventing soil degradation and optimizing resource use efficiency.
- vii. Directing governmental subsidies to extend agro-based industries and processing industries to provide organic inputs.
- viii. Undoubtedly, the move towards sustainable development needs

to change the attitude of policy makers to rural development and reliance on indigenous knowledge-base technologies as two key approaches.

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Conflict of interest

The author declares no conflict of interest.