



ROLE OF MANAGEMENT IN ATTAINING FOOD SECURITY

Dr. Pravin B. Rayate¹

¹ MVP's IMRT, Nashik.

ABSTRACT

Keywords:

Introduction

Natural resources fulfill our needs, useful for us, and the major part of resources comes from nature, these resources are called as natural resources. We must always remember that the life of man as well as other living things depends on the availability & management of natural resources. So we should never waste them, we should use them carefully & only as much as we need.

In India natural resources are ample but because of lack of management, Politicization of issues, fragmentation & sub division of Land etc. has decreased the productivity of food grains. The migration from agriculture because of low productivity, inadequate prices has compelled farming community to go for other option to maintain their hand & mouth Therefore in order to enhance the land productivity & proper utilization of natural resources following factors should be considered.

1. Water Resource:-

Water is the most important input for enhancing agricultural productivity India being a agricultural country proper implementation of water resources is a major concern .Water resources are sources of water are useful to almost for all living beings apart from drinking it , we use it for agriculture ,Industries , Households , cleaning ,recreational & environmental activities .In today's era it is important for each & every nation & every

Individuals to pay more attention on availability and usability of water resources . Every civilian predict for the future , forecast for the future ,how to make effective management of available water resources ,their availability ,actual use ,so all these things should be taken into consideration because 97 % of water on the earth is salt water & leaving 3 % of fresh water of which slightly over two thirds is frozen in glaciers & polar ice laps & the remaining unfrozen fresh water is mainly found as a ground water.

Changes in temperature ,precipitation pattern & snowmelts can have impact on water availability .Higher temperature will increase loss of water through evaporation .the net impact on water resources will depends on changes in quantity of water ,form of water & seasonal timing of precipitation. In addition climate changes introduce an additional elements of uncertainties about future water resources management .It is

very important to government of every nation has to focus on blueprint of water resources ,they have to provide proper roadmap for every user from each sector regarding proper & adequate use of water resources on the basis of previous statistical data. The government has to make an effective public program regarding on rain harvesting, irrigation system etc. i.e. water resources & their availability have direct impact on each and every sector & food security management we should use it carefully ,we should take care that it does not get polluted & waste. Main areas of focus have been public investment in surface system which includes large dams, canals, and other large scale projects. The water resources in India can be divided into rivers canales, reservoir, tanks & ponds, beels, lakes, water and brackish water covering the area of 7 million ha excluding river and canals. The conservation of natural water resources & use of drip irrigation system shall ensured the optimum use of water to increased the production of food grains & other agricultural crops to make the nation self sufficient & food grains.

2. Climate Change:-

Indian Agriculture depend on rainfalls, climate geography, and season which define the agricultural produce facts and figures, for rainfalls , irrigation,crops,soil fertility climate are decisive factors for harvesting and farm production in India. Agricultural outputs are directly proportional to good monsoon; low rainfalls demand good irrigation system and favorable climate for crops with the Indian traditional farming, while the Earths climate has always changed naturally for the first time human activity is now a major force affecting the process with potentially drastic consequences .Climate change is the greatest challenge facing the world today .Long term planning must now include measure to deal with it .Climatic condition are changing in India & every part of the world because of the effect of global warming .Climate changes have significant impact on water resources around the world .Climate change and agriculture are interrelated processes Global warming is projected to have significant impact on condition affecting agriculture ,including temperature ,carbon dioxide and interaction of these element .assessment of the effects of global climate changes on agriculture might help to properly anticipate and adapt farming to maximize agricultural production .The world has to face two challenges The first is to reduce carbon dioxide emission by moving to renewable technologies as soon as possible .The second is to prepare to

deal with the impact of climate change that is already inevitable due to existing level of green house gases in the atmosphere.

The arrival & performance of the monsoon is no insignificant matter in India every year and this is because most of the state in the country are largely dependent on rainfall. Any changes in pattern of rainfalls poses a serious matter for agriculture field and its impact on economy of nation & food security. because of global warming in India some part expected to receive higher rainfalls & some part its percentage some what be decrease. Agriculture will be affected not only by an increase or decrease in the overall amount of rainfalls but also shift in the timing of the rainfalls. Climatic conditions are changing in India & because of global warming cropping pattern should be selected according to environment.

At the national level government should provide specific guide line to Industry to reduce their emission of harmful gases and pay for the damage they have already caused. and including scientist, economist, legal experts, should be involved in understanding the threats from global warming to the country & developing strategies to deal with them. The government should encourage & give financial Aid to scientist for the further study of global warming on the climate change to understand the impact on nature and take preventive action where it is possible. At the local level steps should be taken to minimize the impact of global warming on communities.

3. Biological fertilizer inputs:-

The term biofertilizer denote nutrient supplement input for plant growth which are biological in origin. Biological fertilizers are most commonly known as microbial inoculants. The role of biofertilizer in food security assume special significance. It can provide the new idea for the farmers which is beneficial for increasing productivity, the biological fertilizers have positive impact on soil, relatively cheap, easy & convenient for use. the biofertilizer technology maintain the balance of shortcoming of the conventional chemical based technology. Biofertilizers have different benefits & because of this fertilizer the durability of food grain increases. This may have environmental & Long term implication. Biofertilizers are eco friendly which are being used to improve the quality and fertility of the soil. Biofertilizers are made from biological waste and they do not contain any chemical. they are beneficial to soil. These fertilizer have the ability to solve the problem of salinity of the soil. Biofertilizers have low cost inputs & environmental friendly, unlike chemical fertilizer that damage the environment. Biofertilizer improve root proliferation to release of growth promoting hormones

4. Suitable & Productive seeds:-

Seeds are the first link in total food production, distribution. It is important for future generation and sustaining healthy planet earth. Therefore realization of seed security for food security is very vital. It requires wider understanding, collaboration and investment to respond the long term implication of seed market concentration on biodiversity, food security, environmental stability, and national sovereignty.

Seed is the most important determinant of agricultural production on which the efficiency of other agricultural inputs is dependent. Seeds of appropriate characteristic are required to

meet the demand of diverse agro-climatic conditions and intensive cropping system. Sustained increases in agriculture production & its productivity is dependent to a large extent on development of new & improved varieties of crop and an efficient system for timely supply of quality seeds to farmer.

The government has to play a very important role through the research, agricultural universities, to develop new improved varieties of seeds and its availability to the farmers to increase the agricultural productivity. To meet the Nation's food security needs, it is important to make available to farmers a wide range of seeds of superior quality. The government encourage to Public & Private sectors, Research, Farmers to enhance production of seed towards meeting the objective of food & food security & develop new varieties must be made available to farmers with minimum time gap.

5. Modern Technology:-

Crop yield & productivity of agricultural based on internal resources, recycling of organic matter, biological control mechanism, use of fertilizer, and rain fall pattern. In India most of the farmers used labour itself from family & no specialized equipment or services are used by the farmer most of the time they interested to grow traditional crop. They are not well acquainted with new farming technology, pesticides, cropping system, Irrigation technology, all these things make affect on the final cropping yield, & because of lack of modern technology the land is not cultivated properly. The amount of rainfall in various regions in the country is variable. Hence irrigation in India has been of primary importance. The agricultural universities have to play a very important role across the country to provide new, modern, updated information related to technology, weather, Soil testing, cropping pattern, seeds insects, biological fertilizer to the farmer of country through media, newspaper, conferences, seminar, direct contact in their regional languages.

The farmer can use flood irrigation, sprinkler irrigation, drip irrigation, system to improve the productivity of cropping yield. This system reduces the farming cost of water & labour and make maximum use of soil moisture storage, increase in net return due to increasing crop yield & quality.

The induction of new machinery, technology have transformed the agricultural practice in rural & urban area. Equipments enables the agriculturists to use modern techniques to get high yield and returns

The governments also provide various types of agricultural schemes through local financial institution to farmer to use modern farming techniques like. Mushroom cultivation, Quail farming, greenhouse technology.

The new equipment in agriculture has changed the way of farming and the use of equipment with introduction of modern farming techniques. Most of the equipment which equipped with advance modern features like computer monitoring system, locators, self program controller precise and leading to less wastage of fuel seed, fertilizer

6. Protection from insects:-

Because of green revolution of 1970 the high yielding varieties are opted by farming community to enhance the productivity of

agricultural produce. However the hybrid high yielding varieties are always disease prone & therefore it required some preventive measures to control it, for this purpose in addition to chemical fertilizer the use of pesticides & insecticides is required. The agricultural universities should guide to farmers for use of such preventive measures to enhance the productivity of food grains & other agricultural produce.

7. Capital Investment:-

Agriculture is a gamble on monsoon, so far as Indian environment is concerned the vagaries of monsoon affect the productivity & output of the agricultural produce, therefore agriculture required substantial financial support to sustain with the calamities of nature. Financial support is also required for the investment in seeds of high yielding varieties, fertilizer, pesticides and to market the agricultural produce or store it, unless & until the produce will not fetch to reasonable prices to the farming community. The bank & financial institution should provide short term, mid term, long term loans to make the capital investment in agriculture at the reasonable rate of interest.

After the analysis and interpretation of above factors, the study concludes that,

- 1) The Government should give top priority to agricultural sector in terms of capital, finance, and support prices to agriculture produce.
- 2) Agriculture Universities across the country should work at ground level of agriculture sector i.e. the reach should be up to the small farmer
- 3) In case of natural calamities government should provide quick & adequate assistance to the concern farmers to cope up with the conditions
- 4) Requisite infrastructure like small to mid size dams, water reservoirs should be made available for the conservation & storage of rain water
- 5) It is taken into consideration that in addition to agricultural activities the farmer should be motivated to start secondary activities like rearing of cattle's, dairy farming, etc. which could generate capital to make an investment in farming activities. Small water dams, wells, water ponds be created to provide water to the crops, when natural resources are scanty because of less rainfalls in the region. The barren land should be cultivated to grow food crops in the kharif season.
- 6) The biofertilizers that would be generated by cattle rearing, cattle farming, fishing etc. could be provided to the food crops to enhance the yield of agricultural food crops. If this kind of reconciliation is done the productivity of food grains could be increased by utilizing natural resources at the optimum level possible. This will reduce the burden of borrowed capital & Government subsidies & consequently the small & medium farmer could become financially viable & ultimately they can have buffer food stock to cater the needs of country for food grain consumption

7) In the matter of food security & prices the government should follow precautionary steps because the present food shortage in India is not only because of low food production but the demand is rising faster as a people's incomes & their consumption pattern

7) The government should arrange common programs, seminar, direct communication, to create the awareness among the people of available natural resources, its need, its requirement, its management

REFERENCES

- [1] Climate change and agriculture – Free Encyclopedia from Wikipedia.org/./climate_change_and./Pages 1-10
- [2] Climate change's tech transfer challenges – T.V.Padma (5Nov.2009) scidev.net/./climate-change-s-tech-tera –/Pages –1-5
- [3] Promoting Biofertilizer in Indian Agriculture – Nilabja shah
- [4] National Seed policy, 2002 – <http://agricoop.nic.in/seedpolicy.htm>/Pages-1-19
- [5] Water resources – Free Encyclopedia from wikipedia. <http://www.epa.gov./climatechange/effect/water/index.html>