

ENVIRONMENT: OUR NEED AND RESPONSIBILITY

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ABSTRACT

Agriculture plays a veritably important part in the growth of the country. It contributes substantial quantum in the public income of the Indian economy and give a large number of employment occasion in the country. India has made immense progress in agriculture over the once decades. Technological changes in Indian agriculture have been witnessing a metamorphosis since the preface of the new High Yielding kinds. Due to use of these toxin responsive seeds the yield per unit area has raised sprucely in several crops, giving the country a important- demanded self- adequacy in food grains. Rise in the consumption of ultramodern inputs, irrigation and use of agriculture ministry have been also pace breaking the strangle hold of the traditional agriculture. The Green Revolution promoted the relinquishment of new technologies for boosting crop yields through monoculture systems, bettered crop kinds, chemical diseases, fungicides and irrigation that rotate formerly a deficiency country in food grain product to a spare state. The achievement of the new agriculture development plan has handed a new sanguinity to the Indian agriculture face. There are several natural problems which are associated to civilization, but it appear the maximum concern these days are the issues of cropping pattern, resource declination, prostration of ground water, declination of soil health and soil quality, fall of ecology and surroundings are other extremely severe challenge. It's in various forms and with different and complex results leading to social counteraccusations also. All these problems relate to unsustainable application of agricultureresources and indicate that there's either absence or lack of collaboration of government development plans in the agriculture sector. This Study has simply been conducted to find out that to what extent agriculture could impact the environment.

Keywords: Agriculture, Environment, Revolution, Employment, Opportunity, Consumption, Crops.

Introduction

There's great connection between the position of agriculture development and its impact on environment. Still no vide studies have been conducted on this content as similar. This study offers a gruelling and potentially satisfying area of study of this kind. Its advancement in the field of agriculture has been exemplary. In a short duration of time India has been come to enthral a place of pride in field of agriculture. From a food deficiency area, India has moment come one of the most uniquely developed agriculture nation. In malignancy of manifold development, spatial variations are occurs in the situations of agriculture development that requires in- depth of the study. The present study is largely applicable in ultramodern day environment of sustained development. The present study covers agriculture development and its impact on environment in India. Rather countries in agriculture development have

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been continuously demeaning their environment, through use of ferocious civilization and chemicals input in agriculture. These chemicals have entered the food chains including the ground water, and defiled the environment in such a manner that the conditions of heart, lung cancers etc. have come relatively common in the society. Direct impacts of agriculture development on the environment arise from tilling conditioning, which contribute to soil corrosion, land Stalinization and loss of nutrients. Keeping this in mind, the present study aims to dissect the agriculture development and its impact on environment in India. It's interested to note that environmental condition special reference to development in agriculture has attracted the attention of experimenters now days.

The Green Revolution – Agriculture Make Over

The Green Revolution promoted the relinquishment of new technologies for boosting crop yields through monoculture systems, bettered crop kinds, chemical diseases, fungicides and irrigation that rotate formerly a deficiency country in food grain product to a spare state. The achievement of the new agriculture development plan has handed a new sanguinity to the Indian agriculture face. Green revolution in India is shows with the lesser than before use of fungicides, diseases and using better farm ways that increases the food product. Agriculture sector espoused new product styles and boosted product technology to meet advanced food demands from uninterrupted population growth. For adding food product, emphasis was laid to increase land productivity and therefore various diseases, fungicides and germicides were added to land. Though they gave good results as the product had increased greatly, yet their nonstop and inordinate use has declined soil fertility. There has been an increase in area under free land, due to which deforestation is taking place, as further land is need for agriculture. Preface of High Yielding Variety of seeds has helped in prostrating the food problem and this is the only factor of agriculture development. But at the same time, striking negative goods are noted of this changed cropping pattern on the environment, which has been degraded particularly in respect of soil and water resources. On the other hand, Indian growers weren't apprehensive about the ecological hazard passed due to operation of fungicides. The growers of India are using one- third of fungicides that are consume in third world countries and it's 25 percent of its agriculture lands. With a huge population base and its growing demand for food, the affiliated burden on agriculture has increased. As agriculture evolved into a more productive exertion, it came more energy- ferocious too. Agriculture is directly related with the environment; it has a crucial impact on land use, soil, water, biodiversity and geography. The ferocious agriculture has break up the natural balance and caused main changes in cropping patterns, uses of agriculture inputs, and managing the soil fertility.

Concept of Sustainable Development and Issues of Agro Sustainability

The term Sustainable Development was first use in 1980 in the World Commission on Environment and Development (WCED). Environmental enterprises gained transnational attention during the Brundtland Commission and a document surfaced from Brundtland Commission entitled 'Our Common Future' in 1987 in which sustainable development was defined as assembly the conditions of the community now without abuse of the requirements for forthcoming generations. The word sustainable development implies a long- term vision of expansion and ecological trustability. It's development, which achieves ecological sustainability as determined to assemble public is other requirements, concerning to the subject matter this can be use regarding effective use of natural resources throughout agriculture practices. Sustainable Development of agriculture sector is frequently at the centre of discussion in moment period due to the egregious environmental problems associated with agriculture conditioning. Sustained intensification in agriculture product and affair is pivotal for overall strength of the economy. Sustainable civilization is a fugitive and complex idea to describe directly. Generally, it encompasses objects of maintaining soil productivity, ecological quality and profitable capability. Sustainable agriculture has been describe as "the successful operation of resources for agriculture to satisfy changing human requirements while maintaining or enhancing the quality of environment and conserving natural resources". According to CGIAR (Consultative Group on International Agricultural Research) "Sustainable agriculture is the successful operation of resources to satisfy the changing human requirements, while maintaining or enhancing the quality of environment and conserving natural resources". Sustainable pastoral expansion is the managing and protection of natural resource base and the direction of technological and institutional transfigure in such a manner as to promise the achievement and sustained pleasure of human conditions for the present and forthcoming generations. Sustainable agriculture product not only involves identification and operation of enhanced technology but also environmental and socio profitable enterprises. One of the most important and irrefutable idea behind this conception is maintaining agriculture growth without injuring the resources

base. While sustainable agriculture concentrated on a emblematic relationship between ecology and economics, the development trouble pocketbooks exploitation of resources to meet the requirements of the society. The plan of sustainability has birth of resource managing as the idea of patient yield, ground water position of pullout that couldn't be sustain without reduction prospect situations. Important of the ecological declination is related with the green revolution ministry espoused to raise crop product. Indeed though spectacularly successful in the after ideal in the short sprint, it has high ecological costs in the long run, similar a dwindling water table due to tube wells, water logging, declining soil fertility with extreme chemical toxin use etc. the long term sustainability of the product decreases the product and induce the complex relationship between the resources.

Dimensions of Sustainable Agriculture

Sustainable agriculture is comparing three big types of agriculture traditional product system, conservative ultramodern agriculture(similar as Green Revolution Technologies) and sustainable agriculture. It can compare them the across three dimensions ecological, provident and social. These three dimensions aren't divide in reality they're connected. But in this study we only bandy the ecological sustainability of sustainable development because ecological dimensions are related with the agriculture and environmental aspect. In agriculture environment, numerous traditional and ultramodern farm practices aren't ecologically sustainable "Sustainable agriculture use ecological principles to farm, hence the prefix agro to farm and ecology the wisdom of the relationship between organisms and their environment." "Ecological sustainability indicates reduction of natural resources in agriculture, reducing soil fertility, causing soil corrosion and contributing to global climatic change. Therefore sustainable agriculture needs to cover the natural resource base, help the declination of soil and water; conserve biodiversity; contribute to the profitable and social well- being of all; insure a safe and high- quality force of agriculture products; and guard the livelihood and well- being of agriculture workers. Sustainable agriculture has a number of crucial advantages over both traditional and conventional practices."

How Agriculture Impacts the Environment

The agriculture sector has witnessed significant changes after Green Revolution. Agriculture robotization espoused by the growers considered a significant achievement in food grain product which makes the state Bread Basket of the country. But the parameters used in agriculture disturbed the agro ecosystem and put a question mark on agro ecological sustainability issues. The study reveals the planter's response on cropping pattern which shows that maturity of growers espoused the monoculture cropping pattern in the study area according to the climate condition. The planter's responses on cropping pattern shows that planter espoused the monoculture cropping pattern to mileage the benefits of high product and maximize agriculture productivity. But on other side monoculture cropping pattern directly affect the soil health, environment and memoir diversity. Ferocious use of land by espousing monoculture crop sequence, both micro and macronutrients of soils have shown signs of reduction. It's also observed that with wheat- rice, wheat- cotton and wheat- mustard crop sequence, water resources of the state are over exploited. The crop pattern influences the birth of ground water which forms an important part of the irrigation vacuity for agriculture. This shift in crop pattern assumes indeed more significance because it's the irrigation of major crops which is responsible for birth of ground water in large amounts. The study analyzes those areas where irrigation in the form of gutters and conduits isn't sufficiently available and ground water resources are heavily exploited in the study region in agriculture. There has been a rapid-fire change in technology. Originally conduits and wells were the main means of irrigation but now the new technology of irrigations. g. submersible tube well and other electric pumps are available to prize the groundwater for irrigation and because of these technologies growers had shifted to groundwater for irrigation. Groundwater is the main source of irrigation but inordinate use of groundwater has created the reduction of water in the state. The ground water position is depleting veritably fast because growers are adding the use of groundwater to grow the major crops in the study region. Pumps have been used for rooting groundwater for agriculture and groundwater has come the dependence for irrigation. But in some areas water position rise and in some areas it has decline. It's one of the major ecological changes after green revolution in India. Now both face and groundwater resources are on critical limit for agriculture.

Nonstop use of nitrogenous and phosphate diseases in the ferocious cropping system with lower use of organic coprolites redounded in quick reduction in nutrient from the soils. The soil fertility status of study region endured insufficiency of nitrogen and phosphorus shows the loss in fertility of soil due to ferocious cropping system. It's also noted that phosphorous insufficiency ranges between medium to low in all named sections. Organic carbon is also low in the soil of India. The soil is a stock for the

force of all essential micronutrients to crops. This stock is depleted continuously and has been under stress since the preface of high- yielding kinds (HYVs). Use of HYVs has increased the consumption of chemical toxin and fungicides to a large extent. This increase in the consumption of chemical diseases may be attributed to better irrigation installations which help in the optimum use of chemical diseases. Though the chemical diseases have played a pivotal part in adding the product and productivity but the inordinate and imbalanced use of chemical toxin has redounded in the reduction of other micro organisms in soil, which are salutary for soil health. Soil fertility can increase by use of proper diseases in proper proportion but heavy use of diseases redounded in loss of fertility. The growers use the amount of toxin according to size of land holding to increase the crop productivity and to increase the farm profitability that has led to massive growth in toxin consumption in agriculture. The responses of the replier's reveal that growers uses different volume of diseases according to current cropping pattern, which shows that maturity of growers, are using maximum diseases to increase the productivity. On the other hand, use of fungicides formerly increases the product but in long term it has veritably adverse effect on soil health and as well as human health also. So the growers should avoid further use of agrochemicals to maintain the soil health and emphasis should be given to bio fungicides. Therefore by spreading mindfulness among growers regarding the proper use water and agrochemicals, we can keep our environment clean and safe to live a healthy life. Declining nutrients status and depleting/ rise water tables exacerbated the problem of environmental declination and have questioned about the sustainability of being cropping pattern in India.

Conclusion

The study dissect that biodiversity has play a major part sustainability of product System. In agriculture insects which are growers musketeers and salutary for agriculture are also destroyed by growers with operation of heavy cure of chemicals diseases and fungicides. As of now there's shy appreciation and a erected in exploration for development docket to guide applicable strategies and interventions for preservation and application of agro-biodiversity. Therefore, there's need for effective way to concentrate on the large quantum of bio-diversity, both the underground and below ground, for their proper application and preservation to meet the futuristic requirements. The analysis shows that nearly all the repliers weren't apprehensive of sustainability of agriculture. They didn't follow the healthy practices for this. Also they harmed the land quality with their unhealthy practices like burning the crop residue, redundant use of chemical toxin, not following the crop residue operation, following mono-cropping, and not following zero tillage, which had also exacerbated the problem of sustainability of agriculture. It's important to note that prevalence of burning crop residue and over exploitation of water was more severe in India the so called agriculturally developed country. Also the growers weren't ready to pay for environmental declination done by them. The long term impact of monoculture, inordinate chemical remedy in agriculture have been proved to be oestrous for the health of the soil and the people as also for the entire ecosystem. Cultivating the same crop and repeated use of chemical diseases time after time have rebounded in the dislocation of soil, dwindling organic matter of soil produce the consequences. These consequences left the impact as decline in crop productivity, declining in groundwater, loss of soil fertility, loss in memoir diversity, agronomic problems i.e. soil saltness, alkalinity and water logging.

References

1. Agarwal, Bina, 'Women and Water Resource Development', Mimeo, Institute of Economic Growth, Delhi, (1981).
2. Bhalla, G.S. (1974) "Changing Agrarian Structure in India a Study of the Impact of Green Revolution in Haryana", Meenakshi Prakashan, Delhi, 1974.
3. Chand, R and Haque, T (1998) "Rice Wheat Crop System in Indo- Gangetic Region: Issues Concerning Sustainability", Economic and Political Weekly, Vol. 33, No.26 (Jan27-Jul3), pp. A108-A112.
4. Chopra, K (1990) "Agricultural Development in Punjab: Issues in Resource Use and Sustainability", Vikas Publishing House, New Delhi.
5. Gandhi, V.P and Patel, N.T (1997) "Pesticides and Environment: A Comparative Study of Farmers Awareness and Behaviour in Andhra Pradesh, Punjab and Gujarat", Indian Journal of Agricultural Economics, Vol-52, No-3.

6. Jha,B (2000) "Implications of Intensive Agriculture on Soil and Water Resources: Some Evidences from Kurukshetra District", Indian Journal of Agricultural Economics, Vol-55, No-2, April-June 2000.
7. Kabir, M.H and Rainis (2012) "The Farmer's Perception on the Adverse Effect of Pesticides on Environment in Bangladesh", International Journal of Sustainable agriculture, Vol-4, No.2,p.p 25-32.
8. Ladha, J. K, Pathak, H, Gupta, R.K (2007) "Sustainability of the rice-wheat cropping system: issues, constraints, and remedial options", In Kang MS (Ed.) Agricultural and environmental sustainability - considerations for the future, Haworth Food & Agricultural Products Press, NY, p. 125-136.
9. Parayil,G (1992) "The Green Revolution in India: A Case Study of Technological Change," Technology and Culture, v. 33, no. 4 (1992), pp. 738-739
10. Rao, C.H.H (1988) "Agricultural Growth, Sustainability and Poverty Alleviation: Recent Trends and Major issues of Reform", Economic and Political Weekly, Vol.33 No. 29/30 (Jil.18-31), p.p1943-1948.
11. Sardana,K.P, Manocha,V and Gangwar, A.C (1997) "Growth and Variations in Agricultural Performance in Haryana", Indian Journal of Agricultural Economics, Vol.52, No.3, July-Sept.
12. Tripathi,D.K (2003), "Environmental Awareness Amongst Farmers and Agricultural Sustainability: A Case Study", International Conference on Communication for Development in the Information Age, Department of Extension Education, Institute of Agricultural Sciences, Banaras Hindu, Varanasi, India, January 2003
13. Yadav,D.B and Rai,K.N (2001), " Perspective and Prospects of Sustainable Agriculture in Haryana", Indian Journal of Agricultural Economics, Vol No56, No-1, Jan-March 2001.

