



THE GREEN REVOLUTION IN THE STATE OF HARYANA

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Abstract

The Green Revolution in India achieved autonomy in the creation of food. In any case, in the Haryana territory, this has led to constant natural pollution, especially of the soil, vegetation and water resources. The content of common substances in the soil is decreasing and the use of substance inputs is increasing. Lately, introduced crop groups have been open to inputs, which however required both increased compost distribution and the use of a water frame, leading to contamination of the water by nitrates and phosphates, as well as changes in the level of groundwater. In 82% of the developing geographic area, the extended convenience increase is a further increase that relies heavily on more energetic data sources. Reduced ability to use food supplements, soil physical and substance contamination, and inefficient use of water have limited production efficiency, while monoculture use, mechanization, and extravagant reliance on composite plant confirmation has reduced recently the variety of crops, plants and animals to have. About 60% of the local topography faces soil degradation (water stagnation, aroma and alkalinity), which then jeopardizes the food security of the region.

Keywords: Green Revolution, Extravagant, Soil, Water Stagnation, Food Security.

1. Introduction

The Green Revolution in the State of Haryana

Before the mid-1960s, the creation of large crops in India was largely achieved by promoting created places. To gain freedom in the production of food crops, another

agricultural structure was introduced in the 1960s, widely known as the "Green Revolution." This method involved the use of current developments, including HYV (High Yield Group) seeds, mixed fertilizers, water panel works; more extensive operations and crop confirmation measures. It was successful and the absence of food was achieved. Production of food grains increased from 72×106 mg in 1965-1966 to 167×106 mg in 1991-1992, 198×106 mg in 1994-1995 and 203×106 mg in 1998-1999. This creation continued for both reinforcement and expansion. The area cultivated with cereals varied from 115.1×106 hectares in the years 1965-1966 to 127.84×106 hectares in the years 1990-1991 and the area for high-yield seeds increased from 1.89×106 hectares in the years 1966-1967 at 70.7×106 ha. in 1993-1994. The use of artificial fertilizers went from 0.292×106 mg in 1960-1961 to 12.15×106 mg in 1992-1993.

Punjab and Haryana in public grain production to meet to the commitment to the Green Revolution of the first 3% of the increased 20% to reported went was this level on rice and wheat the government acquired in free as the half and 85% of the contribution has been. Years 1965-1966 in Per hectare yield of 0.63 Mg ha⁻¹ to increase from 1991 to 1992 at 1.37 mg ha⁻¹ have went. 1960 and 1961 to limit the submarine casing the firm quarters around several times increases went. Green Revolution by securing of went increased by some regular issue maintain that like. Forests of deforestation water logging shudder alkalinity turbidity of rot and damage to and spiny water to the water level to rise and the like 1999)

Haryana state that region to focus concentrated that is where in 1960 the decade of the Green

Revolution has had with 4 374 × 106 hectares of geographical location involved is that the 82% cut has been. Haryana Ravi Beas and the Sutlej and Yamuna waterways structures by maintaining the state of the farms of under division is which answers to Shivalik and Himalayan and Yamuna the feeders by the Aravalli and with land while the cross. The state has an unusual reach in the range of 300 to 1100 mm of rainfall. Rural environment an attractive and vibrant wealth structure is that a lot of micro-nutrient ingredients do not meet the.

Article 's original target green revolution of during the went progress and experience has been regularly issues the cover to the order Haryana as India 's most accurate way to maintain the districts in the system of state and manageable challenges to gather to do.

1.1. Land Use Change: an emerging held position

The Green Revolution of the later Haryana the region in growth occurred. 1966-1967 the years the net set up area of approximately 78% and from 1990 to 1991 of between 81% and more of with nominee has been. A titanic wave of well spread wave every year one of the more gather there is 1950-1951 and 1980-1981 of the very long time and for it 11% from 42% up to and then from 1990 to 1991 at 53.6% of spread went it original form of the further developed water balance and crop the advancement of results.

As land use power increased, the space of the underwater soil structure continued to expand, from about 61% in 1984-1985 to 73% in 1990-1991. The extensive submerged territory expanded from 1.29 × 106 ha in the years 1965-1966 to 2.66 × 106 ha in the years 1994-1995.

1.2. Effects of the Green Revolution on cropping systems

In India, since the Green Revolution, there has been a dramatic change in the design of plans for the rainy season and winter crops (Table 1). Rice (*Oryza sativa*) and wheat (*Triticum*) of vegetables bajra (pearl millet) jowar/sorghum (*Sorghum*) the excellent food crops and as a substitute to do while cotton (*Gossypium* spp.) Principle crop. The fundamental crops of 1965 - 1966 stormy season were bajra (46%) rice (13%) and jowar (12%). Rice (34%) from 1995 to 1996 in the original production was that Millet (27%) and cotton (24%) from behind. Winter of crops in a top yield of as in wheat

1965-1966 to 43% of the increase from 1995 to 1996 in 64% have. Haryana in rice and wheat to produce the original as the expansion did (Table 2). Gurgaon area in 1986 and 1995 to limit the wheat 's crop of to 5.22% of the outstanding advance speed.

Processing plans have changed in response to new environmental advances, including aqueduct works, evolved seed pools, pesticides, spectral damage, and new development practices. Recently, the two dominant crops, rice and wheat, have overcome formidable limits and problems for their economic benefits (Sharma and Mukhopadhyay, 1999).

1.3. Environmental impacts of agricultural development

The extension of the compression component from the general population to the land coordinates the conditions for the intended use of all available land. However, vast tracts of land have been contaminated desertification soil and pile floods and useless gardening practices to cause dry weather and forests to harvest the land corruption (Gill 1992; Randhawa 1992) at birth given). The growing interest in food, grain, fiber and fuel must be met by placing greater emphasis on improving and managing civil servants in these weakened districts. In recognition of the severity of the problem, the Indian government has established a National Badlands Development Board (NWDB), which is fully committed to ensuring that the entire drought in the country is harnessed through a massive reforestation program. Given the public demand for different types and groups of vacant land, two main types were considered in this assessment: the social dead zone and the non-social dead zone. Haryana owns approximately 7.54% of the land under these contracts. The largest district includes sandy beaches in Sirsa.

Hissar and Bhiwani, which comprise 3.76 % of the arable dead zone, the areas affected by salt, mainly soluble in nature, and the water-saturated and sloping areas, independently comprise approximately 1.6 and 0.6 % of the zone. social dead. Two depictions of certain affiliations Ambala Karnal Jind Sonepat and Hisar in the leads. Rugged - rugged land - images of related bone - dry desert original form of Faridabad Gurgaon Mahendragarh Bhiwani and Hisar in the leads is and about 0.3% land the cover that. Waste land

Faridabad Gurgaon and Mahendergarh the spread was the which is approximately 1.4% of land to cover it.

1.4. Land use in improving and Board of supplements

The Green Revolution of the gardening in changes to cause land efficiency in slow motion the changes came. Examples of for 1980 at 3% dirt in low P content was and in 1995 in a low P content of 73% dirt to form the saw has had while low N content with soil to replace 89 to 91% by increasing went this week. High- K materials with clay in 1980 to 91% at least through 1995 in 61% have went).

To further develop the creation of a clear culture of soil and water fertilizers, the advisory practice should be improved on the basis of comprehensive information on soil resources. The study of the various elements of soil, water and environmental contamination, compost, spice, insect splashes, pesticides and mechanical wastewater should be intensified. There have also been some basic recurring problems such as soil degradation, construction time, and soil compaction given the large amount of material.

Therefore, farmers recognized the further development of wheat and rice as the best combination to get the most outrageous benefits from improvement. Likewise, we must see the improvement achieved and the effects of the natural imbalance in the grain-rice conversion. To work with normal resources with the weight of wheat-rice, some pastoralists have expanded to include various crops such as soybeans (*Glycine max*) and sunflower (*Helianthus spp.*). A more visible space could be redirected to sugarcane (*Saccharum officinarum*), cotton, oilseeds and soybeans. It is true that the adventures of fishing and dairy farming have also been particularly encouraging for monetary gain. To achieve crop expansion, more emphasis should be placed on different plant species, including herbs and vegetables (Singh, 1999). Lands with a slope of 30% or more in the steep northern part of the state should be reserved for forests. It is necessary to mix different types of accessible waste for poultry, ducks, fishing and bumblebee farming. Useful plants, oil plants and plant species should also be added. Recently, modified substances and normal biotechnology, such as tissue culture development, have also

been used to promote resistant / multipurpose plants and reject the use of pesticides.

1.5. Groundwater use and groundwater descent

About 95-98% of the space under rice and wheat is overgrown. The water structure of the groundwater covers 60-65 % of the need for hard and fast water, the abundance of 35-40 % is covered by streams. This actual abuse has created problems with groundwater. While in different rooms, the water table rises (as discussed above). Several regions of the rice and wheat producing area of Haryana shows a drop of 3-10 meters in the water level. These places are Kurukshetra (10 m) Ambala (3 m) Yamunanagar (3 m) Kaithal (3 m) Karnal (5 meters) Panipat (5 meters). Surface and groundwater assets of a normal use of the future of water in the ground to be supposed executive structure which to harvest the financial building up that.

1.6. Impact on Ground Water Quality

Haryana matter using common country striking Most 30 years manure using 3 to 130 kg ha - 1 to raise it Rice and wheat to compost the used independently as the 160 and 170 kg ha -1 Rice and wheat to crops in N P and K to use ratio bad way to organize it Here also the use of K is less. An unmistakable example of nitrate collection is in destructive fixation in groundwater.

1.7. Soiland water make to the need

Land and water to check land loans in monstrous changes to separate it is a clear form of or implications of land and food fiber and timber of for fundamental issues to be addressed to the ability to affect you. Clay 's situation and clog the danger of a joint assessment of public order in for basic educational tools in the one will (Singh 1997). Land devaluation of the map to make the issue of misleading land of risks to understand there are and governing bodies to blur the are; Open and public establishments in the work of the border ; And agriculture coordinate objectives of for accurate data. States by financing some work and salt and corrosive by polluted soil to repair the consolidated form the country 's waterways and water channels to improve (Warbandi) (Alexander 1985).

Soil treatment and soil treatment are the indications of the annual arrangement of Haryana. Planning Commission 's culture of

advancement and for property to antisocial No Man's Land to as the split contributions of distinctive substances for the area have been distributed. The remediation and development commissions are committed to this task, and the sponsorships also offer obligations to maintain Haryana. The collection of natural resource advisories, the Planning Commission, the assessment of the arid nature of New Delhi, including saline, critical and soggy soils and its reclamation operations, Which was that approximately 6000 4000 and 2000 hectares of land to revive Hisar areas in severity and alkalinity of influence which has. Rohtak and Gurgaon only. Comprehensive quality of as the state of pungent soil in general higher pH 9.3 it is the upper meter of sodium bicarbonate to an additional degree and irrelevant entry rate of well. 1.5 m of normal stature but shit a calcium horizon presents that is this kind of pathogenic calcium carbonate in the presence of the smoke. Such land in desalination of undertaking unusual as the key. Low penetration of a result much faster storage would. Some associations 's about the thinking is that more accurate treatment measures to the right to the expectation of being. Check climate and Timberland farming law commission agricultural business and for public commission gardening of service colleges and various work environments of services by the heart. Progress completed in dead zone. It is urgent to take care of people for an adequate use of the resources of the territory through organized efforts of action and recovery from desolation. Action plans are defined to change land use from standard use to current specific use. He must not only commit to expanding creation, but despite support for expanding creation for wheat and rice, in short, any further corruption of our usual resources. Corrective measures have been taken if the true resistance of the soil to be recovered and its usefulness are described below.

1.8. Enrichment of intrinsic fertility and agroforestry

The innate approach to prosperity is based on the recovery of internal resources to support the use of the land. This should be grown by combining different yields, mixing or rotating with vegetables, planting trees and hedges, the

roots of which derive supplements from important layers to support the development of improvements and water for the soil. The Agro Ranger service can be enhanced with practical creatures, land and water guides, and a land and water development plan designed for various biomass creations, soil resource restoration, and business development and offsetting. The Farmer Service creates on normal principles through a combination of agriculture and a mixed wealth of leaders (Gordon and Bentley, 1990; Singh, 1999).

1.9. Water resources management

Smaller than usual and large-scale measures to maintain and increase lean moisture are waiting for the best and essential motivation to deal with neighbors. The systems remember to ensure in situ impregnation and a combination of small water catchment structures that irregularly improve the soil profile, similar to groundwater. Various managerial and non-managerial motivations are pushed in this direction (Gill, 1992).

These combine to reduce the opening of market income to water resources; Revitalization of underground vaults in districts with decreasing groundwater levels; Revitalization of the filling water through the folding drainage channels by fixing drip trays at the appropriate points ; revitalize by diverting outflow from an adjacent dead zone space ; toning through empty / soak wells ; Restore power by diverting excess water from streams to paddy fields during eddy season ; the penetration of hydrographic basins and the massive reforestation of mountainous areas; Creation of skimmer wells to obtain water of exceptional quality; Construction of large chamber wells near waterways to further develop the switchboard water supply ; Review of water sedimentation, limiting factors and turning behavior of the water frame, taking into account the movement of the cutting unit ; Industrial water in the loading yard, including the collection of the ideal water master plan from the crops ; Grow low-water crops instead of rice, especially on light, enriched soils (crops like soybeans, cotton, corn, cereals, and oats). This package of measures has had extraordinary and imaginable results by sharing poor quality groundwater and canals. The organization of territorial soil protection should be based on a large river basin and not on a

small basin. As such, a true river basin organization, the monetary nuances would come from the City/District target package (1998).

The Haryana Express has come a long way in land use, but at the expense of land and water degradation. The high level of horticulture during the Green Revolution created huge land and water problems related to soil degradation due to improper use of groundwater and soil erosion due to division works with high levels of compost and pesticides. The protection of land and water is important not only for herders and provincial organizations in Haryana, but not only for the nation as a whole. Securing these resources is the key to sensible agricultural change. India's future food grain requirements in 2010 will increase from more than 211×106 Mg in 2000 to 269×106 Mg.

A commitment must be made not only to produce creation, but also to support expanded creation without further degradation of ordinary resources. Any corrective action should have been taken based on the change in actual soil resilience and its effectiveness. When studying the adaptation of the pruned area and the work surface, it is extremely true that monocultures are the predominant structures since the transition of an increase in water loom work in these states. People are turning to more profitable and profitable crops, such as wheat and rice, even though wheat and gram are full of downpour at the moment. But some expansion and the utility and utility of crop development remain a mainstay of the current pruning model. With that in mind, the inspiration to really look at the natural corruption (soil, water and biodiversity, etc.) that is achieved by increasing these crops should really be through catalyst groups.

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