

# Changing Perspective of Tribal agriculture In the Context of Modernization: A Critical Analysis

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**Abstract-** *They are indigenous and natural believers and followers of Indian civilization culture and practices. The impact of modernization practices and influence utterly disturbs their sanity and freedom. They are truly dependent on shifting agriculture and traditional forestry resources whereas the modern technology influence and compulsion adoption to the cultivation of agriculture and its pattern has changed with that influence and shifting culture of in the present society. This has genuinely led to many transformations and impacts on their originality and naturality. Especially, health, natural healing power, herbal knowledge and so due to dependency on modern inputs and uses. This research study explores and describes the pros and cons of agriculture in the changing patterns of tribal agriculture and its practices.*

**Indexed Terms-** *Modernization, Agriculture, Tribal Community, Indigenous and Practices.*

## I. INTRODUCTION

The total scheduled tribe population of India stands at 104,281,034 as per the 2011 census and accounts for 8.6 percent of the total population of the country. Agriculture and allied segment like the forest is the foremost occupation of the tribal people in their everyday needs including food, shelter, tools, medicine, and in some cases even clothes also. By and large, they are reliant on nature for their survival, since they breathe to love and to live in adjacently with biodiversity-rich landscapes. They have grown locally unambiguous and have novel livelihood strategies based on their possession and we should acknowledge the knowledge. This practice and knowledge have furnished a livelihood pattern from

generation to generation through their forefather, who is playing the greatest role in the conservation of sustainable agriculture use of biodiversity. Over the period of modern innovative technology practices and imperative agriculture perspectives altered tribal survival. Despite various kinds of pageants of tribal rights that have been taken since the inception of independence in India, it is needless to say that exclusion from the fruits of development has adversely affected the quality of life of the tribal community. Furthermore, the habitually changing pattern of livelihoods and innovative agriculture perspectives has hampered their finest survival.

Agriculture shows a vital role in the process of economic development and national growth of fewer infantile countries like India. It is one of the fastest-growing economies in the world moreover India is a democratic secular nation. Agricultural development is an integral part of the overall economic advance development. In India, agriculture was the leading spring of national income and occupation at the time of unconventionality. Agriculture and parallel activities contributed virtually 50 percent to India's domestic income. In general, 72 percent of the total working population was involved in agriculture apart from agriculture around 92 percent of the total tribal working community was innocently affianced and depended on agriculture and allied segment of forest predictable resources. These confirm that the Indian agriculture-based economy was reverting at the juncture of independence. After 70 years of independence, the share of agriculture in total domestic income deteriorated from 50 percent in 1950 to 18 percent in 2007-2008. The view of modernizing innovative agricultural technology practices.

Since independence, India has made much progress in tribal agriculture promotion. Tribal pioneering modernized agriculture pattern, which grew at the rate of about 1 to 2 percent per annum during the fifty years before Independence, has grown at the rate of about 2.6 percent per annum in the post-Independence era. Indian Tribal agriculture has progressed not only in output and yield terms but the physical changes have also contributed. All these developments in Indian agriculture are contributed by a series of steps initiated by the Indian Government. Land reforms, the inauguration of the Agricultural Price Commission with an objective to ensure remunerative prices to producers, new agricultural strategy, investment in research and extension services, provision of credit facilities, and improving tribal infrastructure are some of these steps begun.

Indian tribal agriculture has been enduring economic reforms since the early 1990s in the move to liberalize the economy to benefit from globalization. By 1991, there was growing awareness that the innermost looking significance substitution and refurbished exchange rate policy coupled with various domestic policies pursued during the past few decades. Approximately 25,000 tribal families are shifting practicing innovative cultivation. Agriculture has been the traditional occupation for an enormous majority of tribals. Late Pandit Jawaharlal Nehru, the first Prime minister of India, laid down the approach of developing scheduled tribes during the times of generosity of the community. In the year 1969, 24 tribal development blocks were created and various economic support schemes were implemented by Government and sanctioned Girijan development agency with a focus on the implementation of agriculture and allied activities with funds received from the Ministry of Agriculture Government of India. Today, India is one of the largest agricultural-based economies. Agriculture is playing a significant role in the intensification of deskbound human civilization. It had been pretended that agriculture is the foremost priority in the development agenda, but investment in agriculture and tribal development is still lagging behind. One of those is the tribal area, where the people are illiterate and they are living away from mainstream society.

The major tribal groups in the newly formed 29<sup>th</sup> state of Telangana are dependent on mostly allied agriculture for their livelihood and survival. Low agricultural productivity and production have resulted in economic deprivation. New agricultural technology can improve the production and productivity of the agricultural sector in the tribal region and can cause an improvement in the economic condition of the people. The application of new knowledge and technology in the method of cultivation and other agricultural activities by the farmers to increase production, productivity, and quality is called the adoption of innovative modern agricultural technology practices (IMATP). The innovative modern agriculture practices aimed at increasing agricultural productivity in the country by replacing the timeworn methods of farming with a modern and more efficient technique of cultivation. The sixties and seventies perceived the development and extensive adoption of the seed-irrigation fertilizer-plant protection technology leading to the green revolution. Tolerability and implementation of innovative modern agriculture technology practices (IMATP) usually depend upon the following factors:

1. Riposte of the farmer's community to Innovative ideas and knowledge on new technology.
2. Extent and level of Education of the farming tribal community.
3. Financial situation of the inventive farmers, credit availability, and convenience to the Adopters.
4. Existing position of Expertise, and
5. The existing position of attainable Agrarian Infrastructures.

There is innumerable indicator embraced by tribes and derived in their community possessed into doorstep ahead forever over a period of time. In the following innumerable significant pros and cons are constantly exposed still in the Indian scenario.

1. Timeworn practices of cocultivation,
2. Unavailability of modern inputs of technology,
3. Risk-taking behavior,
4. Multidimensional tasks to extension personnel,
5. Agriculture and shifting cultivation are still being practiced by the tribal population on higher slopes of hilly areas of the country,
6. Low level of awareness, knowledge, skills, and attitude,
7. Lack of facility on marketing,

8. Insufficient services,
9. Disjointed with the land system,
10. Lack of foresight and insightfulness, and
11. Lack of excellence of consciousness.

With the passage of time, the perspective of tribal development changed from enumerated achievement to holistic development of tribal people and communities. The centralized plan and goals of programs or schemes changed from target achievement to beneficiary empowerment. New institutions like Panchayati Raj Institutions (PRIs) were put in place to safeguard the interests of the tribes, two Acts, namely, the Panchayats (Extension to the Scheduled Areas) Act, (PESA), 1996 and Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 were enacted. Employment and income generation programs like Mahatama Gandhi National Rural Employment Guarantee Act (MGNREGA) and Employment Assurance Scheme (EAS), asset creation programmes like Indira Awas Yojana (IAY), Prime Minister Gramya Swarojagar Yojana (PMGSY), Integrated Rural Development Programme (IRDP) and Integrated Tribal Development Programme (ITDP) were introduced for rural poverty alleviation, especially in a downgraded community like a tribe.

Therefore, any attempt by the government that attempts to boost their socio-economic condition has to focus primarily on primitive tribes and the poorest of the poor among the scheduled Tribes, with awareness generation and the people's participation approach, and take into account their needs, feelings, and aspirations while the development process is taken up. Sustainable growth in agriculture continues to be the core agenda for both the Central and State Governments. The share of agriculture to state GSDP in 2014-15 is 9.3 percent at current prices. The tribal population of the Telangana State, according to the 2011 Census, is 32.87 lakhs which constitutes 9.34% of the total population of the State. Schedule Tribe literacy rate is 49.51 as against the State literacy rate of 66.46. There are 32 Tribal groups flourishing in the State which include 4 PvTGs (Particularly vulnerable tribal groups earlier known as Primitive Tribal Group viz., Kondareddies, Chenchus, Kolams, and Thoties) predominantly Lambada, Koya,

Yerukula, Kondareddies, and Yanadi are living in Bhadrachalam division of Khammam district. The Government has accorded high priority to the accelerated development of tribals by implementing socio-economic development schemes. The major focus is on education, economic support, and land-based schemes<sup>1</sup>.

## II. NEED AND IMPORTANCE OF THE STUDY

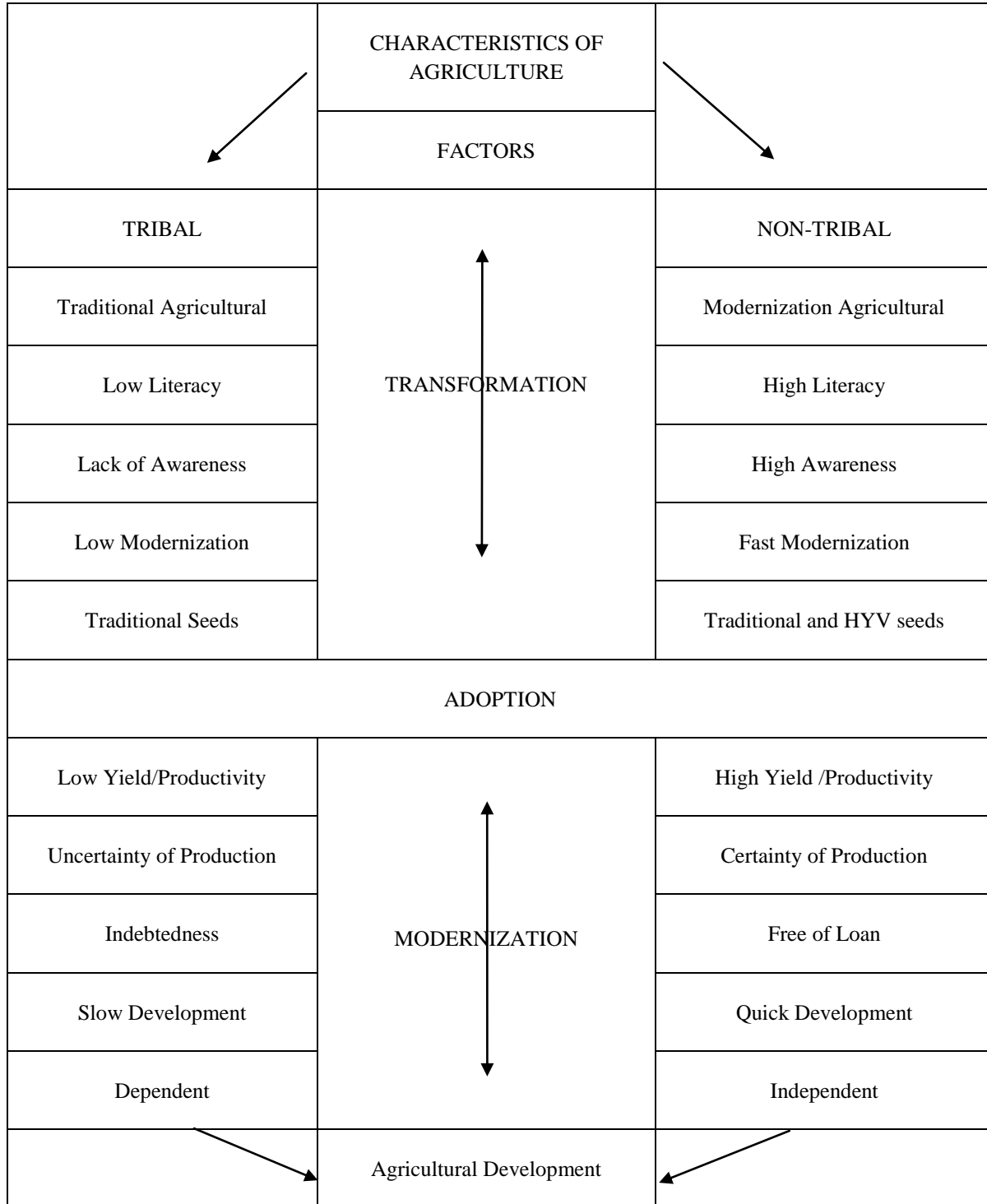
The research paper is basically intended to address, explain, describe, explore and infer the changing perspective of tribal agriculture in the context of innovative modernization agricultural practices on perseverance practice of tribal agriculture and the impact of innovative technology operation on traditional tribal agriculture in Khammam of Bhadrachalam division in India. It will illustrate how modern innovative practices have twisted and accelerated major changes in some parts of traditional agricultural practices. Furthermore, modernization has brought all along the method of dilution in the traditional practices of these communities. This study would be emphasizing the important issues, linked to their natural life, which the tribals are facing today. While modernization has its own significance, one also has to realize that the tribal traditional agricultural method has to be preserved against such forces. It is widely seen today that the traditional features of tribal life are gradually changing from being deeply ingrained in tribal adoption and ethnicities to something that is more rationalized. In a developmental sense, it has been affected due to the adaptation of modern ways of living and altered lifestyle patterns, and changing perspectives of agricultural methods.

The reviews collected from a few published, documented kinds of literature and some unpublished sources this research paper would be trying an approach of giving importance to the slow destruction of the traditions which was once the heritage of tribal culture.

III. CONCEPTUAL FRAMEWORK ON CHARACTERISTICS OF AGRICULTURE

non-tribal agriculture using and adoption of modernization technology and way of methods for cultivation invention in the area of agriculture.

The section tries to attempt and show a conceptual framework on characteristics of tribal agriculture and



The above-depicted figure, clearly shows the measures embraced for accumulative productivity, the use of a high-yielding variety of seeds is of important significance. The weak economic base of the tribal people for provisions granting subsidies was made. Such incentives could not make exogenous methods and techniques pretty to them. On the other hand, some non-scheduled tribal people of the area utilized these facilities in the name of tribals. Even tribals have made it a fashion to obtain irrigation pumps on subsidy and sell them to non-scheduled farmers at the low-cost of market rate. Due to bribes and corruption in government programmes scheduled tribe people are promoted very dawn and inadequate as a result, they cannot get appropriate benefits from government programmes. The reason behind it is the simple characteristics of people's low literacy and deficiency of awareness, and engrossment participation. Similarly, the size of ownership of operational holding in agriculture determines the use of inputs and efficiency of farmers. Several yields flying technologies along with irrigation have been made available but they are not dispassionate to size and they are not within the extent of every farmhand. Being capital exhaustive the use of these technologies and inputs depends, with other things on the aptitude of farmers in general.

#### IV. RESEARCH METHODOLOGY

The study methodology broadly consisted of the following components and steps.

##### 4.1. OBJECTIVES OF THE STUDY

The study was deliberate to fulfill the following objectives:

1. To identify the factors affecting the adoption of new agricultural technology.
2. To examine the impact of new agricultural technology on the production, productivity, and income of the people from the sample mandals of Bhadrachalam Division in Khammam Dist.
3. To explore the extent of the spread of the new agricultural technology in Mandals of Bhadrachalam Divisions in Khammam Dist.
4. To compare productivity between the traditional and new agricultural technology using farmers of

the sample Mandals of Bhadrachalam Division in Khammam Dist.

##### 4.2. REVIEW OF SECONDARY LITERATURE

As a starting point, the study pursued to understand the nature and changing patterns of farmland cultivation with innovative modernization agricultural technology practices through a review of existing literature in the form of research reports, media reports, etc. on the subject along with official documents and sources such as land utilization, utilization and adoption of innovative technology and harvesting growth, the output of yield fabrication at the State and for various mandals in districts for roughly two decades (1990-2009) which formed the focus of this study. A review of secondary also included Government Orders, legislations, and policies, combined with an online search through pertinent hub ITDA and District official websites, etc.

##### 4.3. SECONDARY DATA COLLECTION

The collection of secondary data for the study was done from the offices of relevant government departments in Hyderabad such as the Directorate of Economics and Statistics, Revenue Department, University Libraries, etc.

##### 4.4. SELECTION OF SAMPLE MANDALS FOR STUDY

Using the analysis from a review of existing literature on the subject and secondary data as a basis, 5 sample mandals in the Bhadrachalam Division of Khammam district were selected. Some of the key criteria from secondary data used for the selection of these districts for primary field studies were studied in land use patterns and changing agriculture patterns through shifting systems in the districts where a large extent of agriculture lands has been possessed in tribal areas.

Table(2): Population and possessions of Land Holding

Name of the Mandal/Dist./State	Area of the Hectares	Total Population			ST Population			% of ST Population to Total Population
		Total	Male	Female	Total	Male	Female	
Bhadrachalam	27765.32	89048	45019	44029	25292	12875	12417	28.20
Dummugudem	37471.00	46802	24021	22781	32518	16808	15710	68.96
Cherla	9875.92	42947	21780	21167	23887	12371	11516	54.41
Venkatapuram	9578.75	31765	16381	15384	12452	6487	5965	38.77
Wazeedu	12889.12	24816	12568	12248	12313	6293	6020	49.15

Source: Census of India, 2011.

#### 4.5. COLLECTION OF PRIMARY DATA

In all the above 5 mandals in the Bhadrachalam division of Khammam districts, an attempt was made to collate data from various sources such as the offices of Project Officer(ITDA), Chief Planning Officers (CPO), Mandal Revenue Offices, Revenue Divisional Offices in the districts, Department of Agriculture, etc., the data was collected participative observation and detailed outlook interviews with local representatives with the collaboration of local organizations working NGO's on the issue as well as discussions with farmers and local communities to understand their experience in relation to innovative modernization agricultural practices of agriculture for various projects related impacts over time and its impact.

#### 4.6. STUDY METHODS/TOOLS

A combination of quantitative and qualitative data collection methods was adopted for the collection of both primary and secondary data such as time series data on land use and cropping patterns, trend analysis, use of participative observation, open-ended interviews, group discussions, gathering of previews case studies, policy analysis, etc. to understand and categorize various processes in tribal agricultural.

#### V. THE OPERATIONAL LAND HOLDING

Most of the farmers have a very small-marginal size of holdings. More than 70 percent of the farmers have less than 3acres of land. In Bhadrachalam

divisions around 40 percent own less than one acre of land. Irrigation around 75 percent of the gross cropped area of the sample Mandal is irrigated. The Bank of Godavari River is the major source of irrigation in the utmost of the sample mandals. As per sources of data, 88 percent of the irrigated area is the Bhadrachalam division of Cherla, Wazeedu, Venkatapuram, and Dummugudem possession by tribes.

#### VI. THE MAIN CROPS IN THE SAMPLE VILLAGES

The highest crops produced in the sample mandals are chilies, paddy, cotton, slight pulses, and vegetables. Chili being is the main crop. Tribal is the mixed generation living during when rejuvenation era even forest thus rice being the indispensable food of the villages, trying to follow the way of modernized survival. Therefore, paddy is the second-highest crop in the sample area. These studies reveal that the highest proportion of net scattered area (43.18 %) was used for the fabrication of paddy. Chili was a premier crop of the sample area (54.33%) percent of the net sown area was brought under the chilies crop.<sup>2</sup>

The relationship between crop productivity and choosing the cultivation of crops is a gentle correlation. It is pertinent to mention that area of chilies is suitable due to the bank of Godavari's restraint and very friendly weather to commercial crops like chilies in the area of Bhadrachalam divisions. Thus, the crop structure of the area is being

modernized and is leading to more profitable crops for the tribal community.

#### VII. USE OF CHEMICAL FERTILIZERS

The biochemical manures used in Bhadrachalam divisions of Khammam district were Ureya, Nitrogen (N), Phosphorous (P), and Potassium (K), etc., The per hectare mediocre indulging of UNPK combination was estimated to be 85.35 kg in Khammam district. The per hectare average consumption of the UNPK combination of the sample area viz. Bhadrachalam, Cherla, Dummugudem, Venkatapuram, and Wazeedu, are 67 kg, 65 kg, 22 kg, and 52 kg respectively.<sup>3</sup>

The use of fertilizer helps in the repossession the soil nutrients but chemical fertilizers and pesticides have exaggerated the environment's highly harmful and precise exposure to the future generation well as to crop production. In fact, it ultimately affects human organs.

#### VIII. IMPACT OF MODERNIZATION AGRICULTURAL PRACTICES

Theses section attempts to evaluate the impact of innovative agricultural technology on production and productivity, marketable surplus and income of the growers, and its effect on the environment of the sample area. Accordingly, Donal and Donald (1995)<sup>4</sup> have suggested that sustainable agriculture must meet four imperative criteria:

1. It must produce adequate food of high quality,
2. Be environmentally safe,
3. Protect the resource base, and
4. Be profitable.

The use of HYV along with other harmonizing inputs has increased the production and productivity of the crops for which they have been used. The use of fertilizer helps in repossession of the soil nutrients but the chemical fertilizer and pesticides have exaggerated the environment's highharm and precise exposure to the future generation well as affected crop productivity. The tribal communities still have lower productivity than other communities of the society. These weaker sections of society could not avail of appropriate technology for raising yields or

production. They required sufficient productivity in their fields due to the traditional method's ignorance on their back.

#### SUMMARY AND CONCLUSION

The present study has attempted to gauge the process of development causing the modernization of tribal agriculture. The practice of modern innovative agriculture methods using and implementing a way of proper monitoring has to be ensured for tribal agricultural development. When the modernization process occurred in agriculture should develop transparency in the implementation of various agricultural programmes at the grassroots level. The level of technology adoption is low in the majority of the tribals. This transformation in the level of technology adoption by the tribal and non-tribal farmers of the same area may be due to socio-economic and traditional factors as well as their interest in the new moderate agricultural practices and approach towards these practices. The positive output of these studies has shown that the dynamics like of age of tribal farmers, level of literacy, size of possession, and credit orientation influence the innovative agricultural modernization practices of tribal farmers would focus positively.

Some specific affirmative impacts and fiery hitches and changing perspectives of tribal agriculture in the context of modernization and transformation among the tribal farmer's community of the regions under study are significant.

- 1) Plentiful small and marginal tribal farmers have started and adopted using high-yielding variety seeds, chemical fertilizers, insecticides, pesticides, and irrigators. The growth in the level of overall awareness among the beneficiaries was observed.
- 2) On the eve of modernization perspectives, the tribal farmers and including counterpart farmers of the regions have more food to eat and have lessened the period of food scarcity.
- 3) One of the major enhancements in food habits reduced the problems of malnutrition, under diet, and malnourishment.
- 4) In the sample area of study participative apparent that vegetable intakes have enhanced the inclusive health and hygiene of the tribal farming

community of the region. The vegetable sales enabled the tribal farmers to educate their children, better clothing, and other such benefits.

- 5) In order to increase productivity, the technical input has got to be reoriented and reinforced.
- 6) One of the touching positions is observed that compassionate manpower in the household due to increasing inclination for nuclear family decoration and relocation of youth to urban canters for desirable city life in modernization.
- 7) One of the burning hindrances is that there was a loss of interest in agriculture, especially among the educated youth of the villages.

The following strategy framework for improving innovative modernization agricultural practices in tribal areas is acclaimed:

1. The elementary needs of the tribal village can be stance suit locally if sustainable development has to have any meaning.
2. Regarding soil conservation the soil potency in dry lands can be sustained only through the conservation of organic substance and accomplishing better fertilizer use efficiency through the integration of moisture-conservation practices along with soil-fertility management. Strategies for the on-farm generation of organic matter need to be developed.
3. Newly formed states have to focus on Agricultural universities and Research Organizations have to lay more emphasis on developing seeds, which require less water so that farmers are able to increase productivity even in critical environmental conditions.
4. Today Indian, Agriculture is static and dependent on the timely advent and intensity of the monsoon. It is high time that an overall water management plan for the conservation of water, preparation of watershed schemes, rainwater harvesting, and recharging of the groundwater management system is desired at the local planning level.
5. It should be obtainable to use the Information and communication technology for sustaining and modernizing as well as enhancing the database of region-specific agricultural information and timely broadcasting to tribal farmers of information.

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