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Agriculture Issues in Bhaderwah of Doda District

Mr. Taseer Ahmed[1], Mr. Anoop Singh[2], Mr. Pankaj Verma[3]

[1]Lecturer, Government Degree College Basohli, Basohli, Jammu and Kashmir, India
[2]Research Scholar, APS University, Rewa, Madhya Pradesh, India
[3]Research Scholar, Arni University, Tanda, Himachal Pradesh, India

ABSTRACT

Since ancient times, agriculture has been one of the most significant economic activity in both the nation and the state of Jammu and Kashmir. It merely refers to the growing of crops. It is also regarded as the foundation of the economy. The majority of the population in the state is directly or indirectly dependent on agriculture, making it an agricultural state. It accounts for almost 60% of state revenue, which adequately explains the state's excessive reliance on agriculture. Just 5% of the state's land area is suitable for cultivation, and over 92% of it is made up of steep mountains. Forests cover more than 27% of the state's total land area. 5.16% of the area is made up of permanent pastures, 14% is used for other purposes besides agriculture, and a little more than 9% is desert. The state has been designated as an apple and walnut export zone for agriculture. One of the areas in the state that is centred on agriculture is Bhaderwah. Bhaderwah differs from the rest of the state due to its distinct geographic features in comparison to other areas. Bhaderwah is a town, tehsil, subdistrict, and extra district in the Doda district of the Jammu Region of Jammu and Kashmir, India. It is also known as Bhaderwah Valley. Due to its picturesque surroundings and high literacy rate, it is also renowned as Chota Kashmir (Little Kashmir) and is referred to as the Kerala of Jammu and Kashmir. The topography is irregular, and the landscape is exceedingly rough and mountainous. The region is also known as the "country of towering mountains," "little valleys," and "meadows," all of which exhibit significant elevational variation. There is little room for farming due to the proximity of the Pir Panjal and Lesser Himalaya ranges, which are connected by a large number of tiny forested hills. This area is terraced because of its sloping topography. The Bhaderwah has a mountainous, forested topography, and during the winter, the majority of its sections are covered with snow. The solitary stream that flows into the Chenab River and drains the Bhaderwah valley is the Neeru. Despite all of these challenges, agriculture is still practised and is an important topic of conversation.

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INTRODUCTION

The majority of people in Bhaderwah reside in rural areas and rely primarily on subsistence farming as a means of subsistence. Cultivators, agricultural labourers, livestock husbandry, building construction, trade, and commerce are the main jobs of the working population. The research region is located in Jammu & Kashmir U.T. along the outside Himalayan range at 32.980033°N 75.713706°E longitude. It is in the state's eastern region. The Himachal Pradesh district of Chamba borders the tehsil on the east, Ramban on the west, Kathua and Udhampur on the south, and Kishtwar on the north. The Sub-division has a total size of 112.17 sq km and there are 75,376 people living there According to Census 2011, there are 930 more men than women overall, with a total population of 39,949 men and 35,427 women. People from many ethnic, religious, cultural, linguistic, and social groupings make up the Tehsil, which has its unique history and cultural makeup.

Bhadarwah joined the state of J&K in 1841. Following his coronation as monarch of Jammu and Kashmir, Maharaja Partap Singh gave Bhadarwah as "Jagir" to his younger brother Raja Amar Singh. The Jagir included Thathri up to Khellani, the huge land left of the Chenab River, Bhadarwah, and Bhalessa (Doda)

There are 670 people per square kilometre. There are 13,994 families and 119 localities in the Tehsil. A significant portion of the population resides in rural areas and depends on agriculture and related industries for their subsistence and livelihood. Maize, paddy, wheat, pulses, particularly beans, vegetables, spices, marigolds, and mushrooms are the Tehsil's main agricultural products. Currently, the principal crops of wheat, paddy, and maize produce 18.50, 19.00, and 17.00 quintals per hectare, respectively.

OBJECTIVES

In the region, one of the key research themes or areas is agriculture. This paper will examine Tehsil's terrain in general and agriculture in particular. The following goals serve as the foundation for the study:

1. To draw attention to the agricultural issues in Bhadarwah tehsil.
2. To research the area under study's agricultural and land use patterns.
3. Research the local agriculture in the context of Jammu and Kashmir.
4. To emphasise the role of agriculture in the J&K district Doda Tehsil (UT).

METHODOLOGY

Both the primary and secondary sources served as the foundation for the data used in this study. Using survey reports (census records) gathered from several departments regarding the agriculture and related industry, primary data has been gathered. Books, published as well as unpublished research articles, journals, and internet-based data have all been used to acquire secondary data. The nature of the current study is analytical and empirical. By tabulation and percentage approaches, the data have been evaluated and interpreted to best serve the needs of the study.

AN OVERVIEW

The Bhaderwah tehsil of the Doda district's residents, like those in other parts of Jammu and Kashmir, rely heavily on agriculture for their livelihood. The Tehsil has a total area of 11,220 ha, out of which 6,171 ha are grossly cultivated and 3,085 ha are netly cultivated. The Tehsil supports 13,994 families, although all of its principal crops produce yield levels that are well below those of the country as a whole.

The primary causes of the low output and productivity may be traced to resource-poor agricultural populations combined with rain-fed farming, which puts them in a difficult position to respond to shifting consumer demands and preferences to ease production anxiety. With almost 85% of the people living in rural areas and being either or heavily reliant on agriculture and related industries, agriculture is the mainstay of Bhaderwah Tehsil in the Doda district of Jammu. In this hilly tehsil of the state, crop productivity varies due to climate variance. Bhaderwah's climate is characterised by a very moderate but dry summer with very little monsoon and a fairly chilly, wet winter with the most snowfall because of western disturbances.

Moreover, a variety of vegetable crops, apples, walnuts, and legumes can be grown in this area. In Bhaderwah, locations like Udrana, Ghata, Sartingal, Chinta, Daradu, Kansar, and Gutasa are excellent for growing crops. The tehsil's sole location with the highest output and yield of beans/Rajmash is Chinta.

PROBLEMS OF AGRICULTURE IN DODA DISTRICT

Many issues that affect both productivity and production are being faced by the region's agriculture. The decline in agricultural techniques cannot be attributed to a single cause. The region has uneven terrain and geography, and the presence of mountains and steep areas makes it less conducive to cultivation. Together with this significant issue, there are other other elements that make it impossible for Bhaderwah's agriculture to thrive.

Since the majority of the area is covered by mountains, hills, and peaks that are unsuitable for crop cultivation, one of the major obstacles to the expansion of agriculture in the region is the undulating slope. The agricultural pattern is therefore dependent solely on the geo-ecological conditions. A steep slope and the presence of rocks in the fields speed up runoff and reduce the amount of time available for ground water recharge. Terraces are used to manage small slopes and plateaus; however, these land strips are destroyed by landslides and gully erosion.

CLIMATE

One of the key determinants of agricultural development in every region of the planet's surface is climate. Climate-related factors, such as

temperature, precipitation, hail, drought, snow, and winds, are the key factors of agricultural land usage and cropping patterns. The region experiences extreme weather, and during the winter, the majority of it covered with snow in winter. Wheat and maize require minimum temperatures of 5 and 10 degrees Celsius, respectively, yet these crops cannot thrive in such low temperatures. The region experiences a reasonably warm, dry summer with little monsoon rain and a fairly chilly, wet winter with the most snowfall throughout the winter months due to western disturbances. Compared to the other areas of the Jammu division, this area has extremely little rainfall on average. The region has low agricultural production and productivity as a result of its low average yearly precipitation.

SOILS

The physical variables of agricultural activities are significantly influenced by the soil. It establishes the region's cropping pattern and production. Brown Forest soil can be found in the areas surrounding the Bhaderwah valley, which has grey-brown podzolic soil. The soil of Sungli, Kotli, Udrana, and Ghatha is primarily ideal for the growth of paddy. Maize-oriented soils can be found in the Chinta Valley, Bhalra, and Kursari regions. Vegetables can be grown in the Kansar, Gutasa, Chinta, and Seri regions. Despite the fact that the soils are good for agriculture, there is a problem with the very tiny land holding. Although these soils are deficient in potash, phosphorus, and lime, they are exceptionally rich in humus. As a result, they need a lot of fertiliser to produce big yields. Road blockades occur frequently during the rainy season in several locations, including Bhaderwah to Doda, Chinta, Chamba (H.P), and Bani. Landslides and land degradation also frequently occur (Kathua). These locations are well-known for the avalanches and slide falls that occur during the wet and winter seasons, respectively, and pose problems for everyone.

SUBSISTENT AGRICULTURE

The majority of the locals rely on agriculture and related industries to support their families. With the use of a plough and family members, the farmers and cultivators in the area tend to small plots of scattered land. Modern agriculture equipment is essentially nonexistent; they work with basic tools and ancient methods. Because farmers cannot afford improved fertilisers and high yielding varieties of seeds, productivity is low. Individuals raise crops for their own use and sell the extra (surplus) to the neighbourhood residents. Agriculture still suffers greatly from a lack of infrastructure, including roads, transportation, irrigation systems, energy, and loans.

RAIN FED AGRICULTURE

Rainfall is the only source of irrigation for the upper sections of the region, where agriculture depends on it. Little channels are used to water the land used to grow paddy. The highly irregular rainfall patterns in this region cause semi-drought-like conditions to exist there during the Kharif season. Although there was 144 mm of concentrated rainfall in the area, the slope caused the precipitation to spill over. Irrigation only covers a relatively tiny portion of the land.

TRADITIONAL BOUND

Bullocks are used by Bhaderwah residents, particularly those who reside in villages, for agricultural work such as ploughing and other tasks. Low bullock health and productivity frequently cause delays in timely weeding, seeding, and harvesting operations. Also, they employ rudimentary farming tools that are difficult and demand a lot of manpower. These implements include wooden and iron ploughs, as well as various agricultural field digging instruments. People's attitudes on cropping patterns are not scientific, which leads to low productivity. Agriculture in the region is primarily labor-intensive and connected to tradition.

LAND USE PATTERN OF BHADERWAH TEHSIL

S.NO.	PARTICULARS	AREA
1	Total geographical area as per village papers	11220 Ha
2	Net area sown (Kharif + Rabi)	6171 Ha
3	Area under food crops (Kharif + Rabi)	5834 Ha
4	Area under non-food crops (Kharif + Rabi)	611 Ha
5	Total area sown more than once (Kharif + Rabi)	2981 Ha
6	Area not available for cultivation	3205 Ha

Source: comprehensive district plan doda.

Quantity of fertilizers used for Rabi and Kharif crops in Quantals

S.NO.	PARTICULARS	AREA
1	Chemical fertilizers (Urea, DAP, MOP) (Kharif)	7264 Qtls.
2	Chemical fertilizers (Urea, DAP, MOP) (Rabi)	2060 Qtls.
3	Total Quantity of Chemical fertilizers (Urea, DAP, MOP) (Kharif + Rabi)	9324 Qtls.
4	Total quantity of food grains produced (Kharif + Rabi)	105012 Qtls.

CROP VARIETIES GROWN IN BHADERWAH TEHSIL

S. NO.	SEASON	CROPS	VARIETIES
1	Kharif	Paddy	Giza-14, Shalimar, K-448, Japan-1561
		Maize	Kanchan, KH-517, Kanchan KH-612, ProAgro-4794, Sri Ram Bio-9621, Dekalb Double, DMH 7314, Bisco Ujjala, PAC 781, PAC 740
		Pulses	Mash PU-19, Moong PS-16,
		Fodder	S.S.G Cherry,Jowar, M.P.Cherry
2	Rabi	Wheat	PBW-175, PBW-343, RAJ-3077, RAJ-3765 PBW-226, PBW373, PBW-502
		Oil seeds	Mustard KS-101, KOS-1, Pusa Bold, Gobi Sarsoon GSL-1, Toria Local
		Pulses	Gram C-235, Lentil K-75, Peas Rachna
		Fodder	BarseemBL-1/Muscavi,Oats Kent Sabzar.

Source: District fact book doda.

SOIL EROSION AND LAND DEGRADATION

Although soil erosion is a worldwide occurrence, it is more prevalent in regions with high rainfall rates and undulating topography, as well as in regions with low rainfall rates. Water removes a lot of soil during heavy downpours; the top soil is washed away by the fast-moving raindrops. Due to their increased volume and weight, the coarser particles are not moved around as much.

The pace of soil erosion has been significantly accelerated by the arbitrary cutting down of trees, livestock grazing, transhuman activities, inappropriate land use practises, and other factors. Due to the district's clear-cut woods, frequent flooding occurs, causing fertile land along river courses to be destroyed and negatively harming crops, animals, and other property.

SMALL AND FRAGMENTED LAND HOLDINGS

Geographically, the district has a total area of 11220 ha, a cropped area of 6,171 ha, and a net area of 3085 ha. The entire area has been partitioned into a number of narrow land strips. With the split of land holding passed down through each generation, the size of the holding is extremely small and even getting smaller every day. Due to population growth, it has intensified in places of dense population, particularly in the plains of Bhaderwah. The law of inheritance is the primary cause of the limited holding. Each of the father's sons receives an equal share of the land. This land distribution is fragmented by nature and does not call for a collection or consolidation. Small and fragmented parcels of land are to blame for the district's low output and productivity.

SEED PROBLEM

One of the essential inputs for a rich agricultural production is regarded to be seed. The growers in Bhaderwah Tehsil of Doda District continue to use traditional seeds in their fields, which ultimately results in low yield. The majority of farmers, especially small farmers, do not have access to high-quality seeds, which is the main cause of this problem. The fact that small farmers cannot afford to buy high-quality seeds is another factor. The majority of the Bhaderwah Tehsil is sloped, and agriculture depends mainly on rainfall, which does not sustain high yielding varieties of seeds. Because they need a lot of moisture, fertiliser, and other better inputs for growth, HYV seeds.

IRRIGATION PROBLEM

One of the most crucial agricultural inputs for the expansion of agriculture is irrigation. Rainfall in this location is incredibly unpredictable and inconsistent. Unless and unless more than half of the cropped area is brought under guaranteed irrigation, the district cannot advance in agriculture. Only 1,028 hectares of cropland are currently irrigated, which is insufficient compared to other parts of the state. Another challenge is digging irrigation canals since they need to be made of concrete because the area is hilly and treacherous. However, the government has stared irrigation projects to comeback the irrigation problem

but due to less maintenance and low credit these projects remain on the mid-way.

OTHER PROBLEMS

Numerous minor issues, such as a lack of credit options, the absence of new and cutting-edge agricultural equipment, the absence of a well-organized institute for awareness-raising initiatives, and the low level of public interest in the agricultural sector, are obstacles to the expansion and development of agriculture in the region. Limited agricultural production, a lack of adequate government policy towards the area, and the need for market infrastructure all contribute to an imbalance between backward and forward linkage.

CONCLUSION

Agriculture comprises backbone of economy in any corner of the world. Therefore, it is crucial for the residents of Bhaderwah and Jammu & Kashmir in general. Being an agricultural region of UT, Bhaderwah has a unique blend of benefits and drawbacks. to establish a setting that addresses the aforementioned concerns and problems and leads to a revolution of agriculture. These issues call for long-term sustainable solutions that reduce obstacles to agriculture's expansion and advancement. Hilly terrain with steep slopes, the presence of rocks in the fields, variations in rainfall, and the topography's unevenness Rapid runoff and little potential for ground water recharge are caused by steep slopes. The fact that most farmers continue to use conventional, non-hybrid seed as a major contributing factor to low productivity. Lack of nutrients during the growing season combined with outdated equipment, unbalanced fertilisation, and non-scientific farming practises Insufficient investment in programmes for research and development, as well as poor input in the agriculture sector.

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