IMPACT: International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL)
ISSN (P): 2347-4564; ISSN (E): 2321-8878
Vol. 6, Issue 9, Sep 2018, 319-324

THE PHYSICAL ENVIRONMENT FOR POULTRY FARMING: A CASE STUDY OF AJMER CITY

Amarjeet

Assistant Professor, Department of Geography, Government College Bhiwani, Haryana, India

Received: 21 Sep 2018 **Accepted:** 28 Sep 2018 **Published:** 30 Sep 2018

ABSTRACT

India is a developing country like all other developing countries; this country to is facing the twin problem of their nourishment and unemployment. The vital need of the hour is to produce and grow material which helps the Indians in removing the ill effects of undernourishment. The calorie intake of an average Indian is very low, so the dietary supplement is a must for India, which is a poor and half starving nation. The development of the poultry industry will go a long way in providing nutritious food to the millions of Indians it will help in their economic uplift and will also provide new vistas of employment. Poultry farming is developing in India day by day; it has brought a drastic change in our economy, but farmers face so many difficulties in it.It is not an easy job to the farmers, because many Chickens dies during the poultry farming. There is a lack of knowledge to farmers about the environment and feed in the farming. This paper is an attempt to highlight the physical environment for poultry farming with special reference to Ajmer city.

***KEYWORDS*:** *Physical Environment, Poultry Farming*

INTRODUCTION

Poultry farming in India has shown a tremendous progress during the second half of the twentieth century. In fact it has emerged from a backyard venture to a highly sophisticated industry. The importance of poultry farming, particularly in a developing country like India, cannot be overemphasized. Given proper urged and required facilities, poultry farming can be expected to play a multi-purpose and effective role in the life of the common man in India. Such a study will also provide some clue to help in removing to some extent the problem of malnutrition. It will also increase the scope of additional income to farmers and other underemployed people. To the unemployed, it will highlight the scope of whole time self-employment schemes in all the settlements i.e., urban and rural. But problems come when the farmers face difficulty in the poultry farming. It is essential for the farmers to know about the environment best suited to the farming. This paper is going to discuss the physical environment for poultry farming in Ajmer. Ajmer city is situated almost in the center of Rajasthan. The name Ajmer is derived from "Ajaymeru" (the invincible hill). It was founded by Chauhan King Ajaipal in the beginning of the 6^{th} century A.D. Since its origin, it has been playing an important role in the history of India.

Location and Historical Background

Ajmer lies at the foot-hills of the Aravali range at an average altitude of 486 meters (about 1600 ft.) above the M.S.L and at the intersection of $26^{0}27^{1}$ North of latitude and $74^{0}37^{1}$, East of longitude. It is an important junction on

the Delhi-Ahmedabad meter gauge railway line and is about 300 km. South- West of Delhi by the direct route. Delhi-Ahmedabad national highway No. 8 is passed through Ajmer. Jaipur, which also lies in the national highway is only132 km. North –East of Ajmer, state highway No.26, 4 and 18 link Ajmer with Kota via Deoli towards the South-East, Bhilwara via Nasirabad in the South and Merta via Pushkar towards the West, respectively. The present city is situated in a valley, about which it is said, that it was once the bed of Sabermati river.[2]

In Rajasthan, it occupies a unique position among the towns of the state as it is 704 km away from Bikaner, 301 km, from Udaipur, 207 km, From Kota, 131 km, from Jaipur and 219 km, from Jodhpur. Thus Ajmer is an important city from the location and situation point of the view. Ajmer is an important center of trade and commerce of Rajasthan. According to Sharma, it derives its name from Ajay-Meru-Durg, a fort constructed on Taragarh hills by Ajay Pal, the Chuahan ruler of Sambhar in the 6th century A.D[3]. It is, however, believed that developments dating back to as early as 200 B.C. existed at Inderkot i.e. the Durgesh area[4]. The earliest reminiscence of development of the town in the valley dates back to 700 A. D[2]. In and around 'Adhai Din Ka Jhopra', a Hindu University just west of the famous Durgesh of Pir Khwaja Muin-Ud-Din Chisti.

Presently Ajmer is laid out two valleys: the Anasagar valley and Foy Sagar valley between Taragarh and Madar hills. Since these lies on the dry bed of an ancient river. Sabarmati, number of marshes and low lying are still found within the city area. Ajmer originally occupied only about 550 acres of land within the fortification. Now the covers about 5,500 acres. But the municipal area in 1981 encompassed about 9,500 acres. Ajmer occupies a unique position among the cities of India. Natural beauty, history, and religion combine to make Ajmer the most famous place in the country.

Surface Configuration and Drainage

The most conspicuous relief feature of Ajmer constituted by the Aravali ranges which run from North-East to the south-west. These are one of the oldest mountain ranges, not only in India but in the whole world. These have passed through several cycles of erosion and still retain the characteristics from the mountains. Structurally, these are composed of rocks belonging originally to the Delhi –system, folded in a synclinorium occupying the site geogynckline. These hills have been deeply eroded, but still, there remain several summits which rise over 1,000 meters above the M.S.L. The whole landscape still preserves the characteristics of a range. From Ajmer onward, several parallel ranges become conspicuous.

The Aravali ranges are broken into a few branches in Ajmer city. Each branch is called by different names. The Madar Hills are lower than Taragarh, between these two hills lies the main valley in which the greater part of the city is located. This valley is broader towards south and narrower towards the north. The Taaragarh range merges into the Vindhyan system near Abu. The Nagpahar or serpent hills at a distance of about 5 k.m. West of Ajmer city attains 933. 72 meters elevation. In the northwest direction lies another important valley which is circular in shape. It is situated between Taragarh and Chamunda hills on one side and Nagpahar on the other. Another narrow, long valley lies between Madar Hills and offshoots of Nagpahar hills.

Vegetables and Soils

A subsidiary edaphic type of dry tropical forests is found in the region. The most common trees found in the region. The most common trees found in these forests are Dhatura (Datura fastuosa), Jharberi (zizyphus nummularia), Bans (Dendrecalanus strictus), Peepal (Ficus religiosa) etc. It is regrettable that there are only a few clusters of trees to be found in the city due to deforestation. A low cover is scanty both on the slopes of the hills and in the valley. After good rains, the grass grows to a height of 25 to 40 cms, but it is soon cut and utilized as fodder. Bans (Denrocalaunus strictus) are found on the higher slopes on the Taragarh Nagpahar forest reserves in Ajmer. The wood of the forests of the region is utilized in the manufacture of agricultural implements and for fuel purposes. The scientific data on soils of Ajmer is not adequate.The oldest sources of information available are are the settlement reports and district Gazetteer, both of which gives a textual classification of soil arrived at by the empirical methods are revenue assessment purpose. The soil of Ajmer city on a geological basis fall into the following divisions:-

Brown Soil

This soil is found in the northwest mountainous region of Ajmer city, mainly in Aravali ranges. The color of the soil is the light brown to dark brown. This soil occurs in areas of the rocky surface. This is a shallow soil of 33 to 120 km. depth lying over rocky strata. The surface is uneven and broken, the soil is loamy and sandy loam with gravel and the soil is locally called kankrilli soil.

Red Soil

The type of soil occurs in the extreme northwestern part city along its boundary. Slithy loams to salty clay are common textures. These soils are poor in carbonate and humus content, with good moisture holding capacity. The clay content varying between 7 and 9 percent. Calcium carbonate is absent and salt content is low. This soil is called ‘pahari balu’ locally.

Alluvial Soil

These soils occupy the southeastern part of the city. In it phosphorus and humans contents are low. It varies from clay to sandy loams in texture. This soil produces many varieties of crops.

Drainage

The city does not have any perennial river of importance. In the neighborhood of Ajmer city, are the Sabarmati river and the Looni flows north-west and north. In this area, they contain water only during the raining season and even at this time the river becomes choked with advancing sands at many places. There are many Nalas which flow from all directions towards the city. They are mainly seasonalduring rainy reason,there are many smaller hill torrents originating from the slopes of the Aravali range is largely inundated. The area near Ana Sagar and Foy Sagar are the important lakes of the city. They are still the main sources of water supply in Ajmer city.

Climate and Special Weather Phenomena

Ajmer being girdled by the Aravalies. The city is protected from the westerly sandstorms which are a common feature in this part of Rajasthan. The prevailing winds are from the west and south-west, although the interviewing valleys create own micro winds. The temperature of this place is moderate, due to the moderating influence of two big lakes in the

city. Except in July and August, the humidity level throughout the year is low. All these physical factors combined together contribute to moderating the climate conditions. The climograph of Ajmer city shows keen and raw weather conditions. The only observatory in the district is located in Ajmer city. The Indian Meteorological Department recognizes the following four seasons in this region.

- The Summer season - March, April, and May, June
- The Monsoon season - July, August, and September
- The Post Monsoon season - October and November
- The Winter season - December, January, and February

The Winter Season

The winter condition prevails from December to February. After mid-November both day and night temperatures drop rapidly till January, which the coldest month with the mean daily maximum temperature of 22^0C and the mean daily minimum temperature of 7^0C. Relative humidity remains between 54 to 56 percent. January is the coldest month and records the lowest temperature of the year. In this month mist of fog often occurs at night and lasts until the early morning hours. On the whole, cold weather season is characterized by clear sky, fine weather, low humidity and large diurnal range of temperature. During the winter season the weather of Ajmer city is controlled by two pressure systems:

- **The North-Western High over the Thar Desert**
- **The South –Western Lows over the Arabian Sea.**

The Summer Season

The summer season extends from April to June with March as the mouth of transition between the winter Summer seasons. The period from March to June is one of continuous rise in temperature. May and the first half of the June being the hottest part of the year. The mean daily maximum temperature is 27^0C. In May and June, the maximum temperature ever recorded in Ajmer was 45.5^0C, on May 16, 1912.

Before the outbreak of the monsoon, viz., May and June are the hottest months in Ajmer city. Owing to low humidity, the heat is unbearable. The night temperatures in June are a little higher than those in May. The heat during the day increases rapidly after sunrise. On account of the atmosphere, the clear sky and the sandy nature of the soil, there is a rapid radiation of heat from the earth soon after sunset and the heat of the day rapidly dies down. The result is that when the temperatures during the day are very high, night temperatures are considerably low. Occasionally dust storms bring about a sudden fall in temperature. Sometimes these storms are followed by rains which result in lowering the temperature. The heat of the sun during the day makes the exposed sand and rock surface so hot it impossible to walk bare-footed.

A low-pressure area which starts developing from the month of April over the Thar desert gets intensified in the month of June. The heated air ascends but there is no rainfall as the relative humidity in May is only 30.7 percent. The hot winds continue to blow over most of north India from the west and south-west till the advent of the summer monsoon.

Rainy Season

The south -west Monsoon season is comparatively short in this reason and lasts only up to mid – September. The period from the second half of the September until the end of November is the Post – monsoon season. The onset of the south -west monsoon towards the end of June lowers the temperatures somewhat, but the relief from the heat is not marked because of the added discomfort from the increase in humidity (over 65 percent) brought in from the south- west monsoon air.

The south-west monsoon from Arabian sea gives copious rains to Malwa, Jhalawar, Kota and in the areas of Chambal Basin. The winds which strike Kathiawar and Kutch (Gujrat) are deprived of their moisture to a great extent due to the presence of the hills in those areas. The greater part of the remainder falls on Mt. Abu and the higher slopes of Aravali at Tragarh, leaving a very small amount for Ajmer and Kishangarh, where the hills are low. Generally, the heavy rain occurs in association with the advance of the monsoon from the Bay of Bengal. July and August receive more than 60 percent of the total annual rainfall. In October, a decrease in rainfall is witnessed but the mean maximum temperature remains higher than in September.

Special Weather Phenomena

Hot dry westerly winds, known as 'Loo', blow throughout the season, but their intensity is at the maximum in May and early June. Their velocity increases from 10 A.M. till noon, and whenever conditions are favorable the winds blow almost with a gale force until 2 or 3 P.M. after which they fall off very rapidly. By the evening, they die out completely. On days when these winds are most vigorous, the humidity at noon may be as low as 2 to 3 percent.

Another significant feature of the hot weather is the occurrence of the dust storm in the late afternoon. These storms are locally known as 'Anadhi' which are generally accompanied by cool winds and enormous clouds of dust which surcharge the whole lower atmosphere and reduce the visibility. Sometimes, it is difficult to see an object, even a few and can uproot trees. These winds blow with a velocity of 48 to 64 Km. per hour and can uproot trees. These storms are short-lived and frequently end in light showers.

The total rainfall received during the hot weather season ranges between 0.6 and 10cm. This rainfall is helpful only in giving some relief from the heat of the day as well as in the preparation of the fields for the sowing bajra, jawar crops.

Cloudiness

During the south-west monsoon season. The sky is moderate to heavily clouded. There is overcast for some days. During the rest of the year clear, or lightly clouded sky prevails. But on a few days in winter season sky becomes cloudy when the area is affected by passing western disturbances.

REFERENCES

1. *Agricultural Marketing in India. Anmol Publications, N e w Delhi, Singhal A. K. 1989.*
2. *Common Wealth Secretariat, Common Poultry Diseases, Diagnosis and Control Marlborough House, London: 1997.*
3. *Dhoondiyal, B.N. Rajasthan Distt. Gazetteers: Ajmer. 1966.--- "Ajmer Historical & Discriptive", M. Sharma. 1955.*
4. *--- "Sharda, H.B. Ajmer Historical Discriptive", 1941.*
5. *Pfizer Poultry Production Handbook, Kekeocha: 2000.*
6. *Poultry Health and Management, Sanisbury, 1999.*
7. *Jha, B. K., and A. S. I. T. Chakrabarti. "Back yard poultry farming as a source of livelihood in tribal village: an economic appraisal." Int. J. Agric. Sci. Res 7.1 (2017): 267-274.*
8. *Poultry' Metabolic Disorders and Mycotoxins, Steven Lesson, Gonzalo J. Diazg. and John D. Summers, 2001.*
9. *Shrivstava, A. L. " Akbar the Grat", V-1. 1962.*
10. *Watson, C.C. Rajputtana Distt. Gazetteer, Vol-1-A: Ajmer-Merwara: 1904.*
11. *Sathe B. S. (1998), Dairy' farming in highly concentrated states-Evaluation of Current Status and Sustainability. Pub. National Bank for Agricultural and Rural Development, Mumbai.*
12. *Bansode, S.,D., Lohar, S.N. andNandre, S. B. (1984). 'Economics of Poultry Farming'. Poultry Advisor, XVII (1); 35-38.*