

Vol 3 Issue 8 Sept 2013

Impact Factor : 0.2105(GISI)

ISSN No : 2230-7850

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Monthly Multidisciplinary  
Research Journal

*Indian Streams  
Research Journal*

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**RNI MAHMUL/2011/38595**

**ISSN No.2230-7850**

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

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**GRT** **STUDY OF THE RELATIONSHIP BETWEEN  
KRISHI-PARASHARA MODEL OF RAIN FORECAST  
AND ACTUAL MONSOON PERFORMANCE**



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**Abstract:** Monsoon is a great cause of concern in Indian subcontinent affecting lives of millions of people in India. For rain (monsoon) forecast several traditional and modern models are existing. These models of monsoon forecast contain certain limitation. This study throws a light on an age old method of rain forecast given by Krishiparashara its indicators and verification of one of the important indicator. The research findings show that there is a close relation between Friday as the first day of the bright fortnight of the month Chaitra in Hindu calendar and poor monsoon performance.

**Keywords:** Krishi-Parashara, Rainfall Prediction, Chaitra month

#### INTRODUCTION

India has a unique location in Indian subcontinent and especially in Asia. Its north south expanse resulted in diverse climate in the nation. For a strong base of 1.2 billion population Monsoon rains is a major source of water. It quenches the thirst of population and also proves beneficial for agriculture. The population is growing at a rate of approximately 1.1% every year, resulting in rising demand for water for various purposes. On this background the monsoon forecast gained immense importance. As an agrarian economy, it is heavily dependent on monsoon performance. So nowadays much importance is attached with Forecast of monsoon.

#### KRISHIPARASHARA

It is a text on Ancient Indian Agriculture. It contains 243 verses written in Sanskrit. Original Sanskrit text translated in English. Verse 2 to 9 informs us about importance of Agriculture. Verses 11 to 78 related to rainfall predictions and indication of famine. The remaining verses are devoted to Management and operations in agriculture.

Review of the related literature:

· Sivaprakasam S. and Kanakasabai V. attempted to study the indicator given in Almanac for a period of 60 Tamil years and actual rainfall. The researchers studied the factors like- King, Minister, Meghadhipati, Megam(Cloud Type) as the parameters. Researchers concluded that there is closeness among almanac predictions and actual rainfall.

· Ms.R.Rengalaxami attempted to study the farmers traditional knowledge about climate and cropping pattern. The study brought out the fact that farmers possess vast traditional knowledge on rainfall prediction. The research focused the need to bridge the different knowledge systems.

#### OBJECTIVES OF THE STUDY:

- 1.To analyze the parameters for rainfall prediction given by Krishiparashara.
- 2.To list the first day of the bright fortnight of month Chaitra in Hindu lunisolar calendar between 1871 to 2009.
- 3.To find out relationship between First day of the bright fortnight of month Chaitra and actual monsoon performance.

#### SCOPE AND LIMITATIONS:

- The major limitation of the present study is no regional data about monsoon is considered. The all India average is considered.
- Only one parameter/indicator in Krishi-parashara model is used.(monthwise observations and predictions- Prediction of rainfall in Chaitra).

#### METHODOLOGY:

Researchers studied the script 'Krishiparashara-Agriculture by Parashara.' Then researcher analyzed the parameters in Krishiparashara model of rain forecast. The review of the related literature was done with respect to traditional methods of rain forecasts like Almanac predictions. Observations were noted down. Researcher studied one more parameter in Krishiparashara model of rain forecast that is Prediction of rainfall in Chaitra. The verse 44&45 identified for the purpose of the study. The verse 44 says ' If the first day of the bright fortnight of Chaitra happens to be Sunday, rainfall in the year is average and if it happens to be Monday the entire surface of the earth drenched with water flowing due to continuous, forceful and heavy rains. The verse 45 says- If that day happens to be Tuesday, rainfall is not satisfactory in that year. If it is Wednesday, Thursday or Friday good crops leading to happiness are indicated. However if it happens to be Saturday, even the ocean will dry

up and the earth will indeed become invisible due to mantle of the dust in the atmosphere.'

In order to correlate the parameter with actual monsoon performance researcher accessed the data available on official website of Indian Institute of Tropical Meteorology(IITM). Researcher studied the rainfall anomalies given by All india summer monsoon rainfall data during 1871-2009. The collected data was analyzed to find relationship between the drought year as well as flood year and first day of bright fortnight of Chaitra in that year.

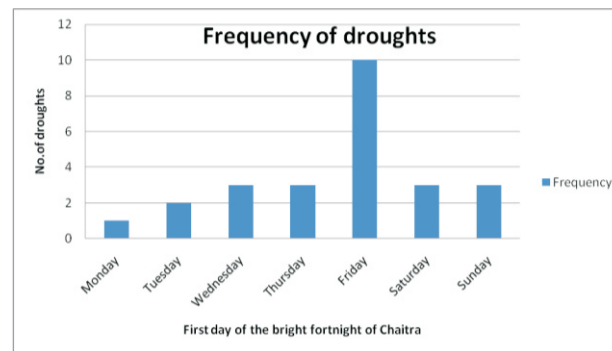
**RESULT AND DISCUSSIONS:**

**Table 1: Drought years in India and occurrence of first day of the bright fortnight in the month of Chaitra.**

Year	1 <sup>st</sup> Day of the Bright fortnight of Chaitra
1873	Saturday
1877	Friday
1899	Tuesday
1901	Thursday
1904	Friday
1905	Wednesday
1911	Friday
1918	Friday
1920	Sunday
1941	Friday
1951	Saturday
1965	Friday
1966	Wednesday
1968	Friday
1972	Thursday
1974	Sunday
1979	Wednesday
1982	Friday
1985	Friday
1986	Thursday
1987	Monday
2002	Saturday
2004	Sunday
2009	Friday

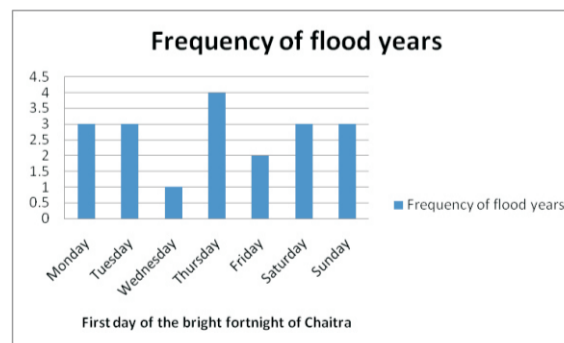
According to Krishaparashara' if it happens to be Saturday, even the ocean will dry up and the earth will indeed become invisible due to mantle of the dust in the atmosphere.' From the observation of the data given in Table 1 shows out of 24 drought years there are only 3 years when Saturday was the first day of the bright fortnight of Chaitra. Against abovementioned observations researcher found that there is only 1.2% relation between drought years and occurrence of Saturday as the first day of the bright fortnight

of Chaitra.(as per parameter given by Krishiparashara) The data analysis shows that in 24 drought years there are 10 years in which Friday happened to be first day of the bright fortnight of the Chaitra. It is concluded that there is 41% relation between Drought years and Friday as the first day of the bright fortnight of Chaitra.



**Table 2: Flood years in India and occurrence of the first day of the bright fortnight of Chaitra.**

1874	Thursday
1878	Wednesday
1892	Tuesday
1893	Sunday
1894	Saturday
1910	Sunday
1916	Monday
1917	Saturday
1933	Monday
1942	Tuesday
1947	Sunday
1956	Thursday
1959	Thursday
1961	Friday
1970	Tuesday
1975	Saturday
1983	Thursday
1988	Friday
1994	Monday



**FINDINGS FROM REVIEW:**

- Some indicators given in Almanac and Krishiparashara are common like King Planet, Minister Planet, type of Cloud.
- the factors like monthly predictions in Krishiparashara model like direction of blowing winds in the month of Pausha(January), Ashadha(July) differs from the almanac indicators.

**FINDINGS OF THE STUDY:**

- There is close relationship between occurrence of drought and Friday as the first of the bright fortnight of month Chaitra. Whereas when Saturday happens to be the first day of the bright fortnight of Chaitra there is less possibility of drought as compared with Friday. The droughts occurred on other days also but their frequency is less.
- Researcher found minimal relationship between flood years in India and Monday as the first day of the bright fortnight of month Chaitra.
- The relationship is not significant between rain performance and Tuesday as the first day of the bright fortnight of month Chaitra as given in Krishiparashara model.

**CONCLUSION:**

- The findings of the study show that there are more chances(42%) of drought when Friday is the first day of the bright fortnight of Chaitra in Hindu lunisolar calendar.
- The findings of the study shows that there is very less chances of drought when Saturday happens to be the first day of the bright fortnight of month Chaitra.

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