Validity of Rain Conception and Rain Delivery (RCRD) Model in Long Range Rainfall Prediction Based on Ancient Literature

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Rainfall prediction has prime importance in an agrarian country like India, wherein the agricultural production is solely dependent on the monsoon rainfall. Among various astro-meteorological methods for rainfall forecasting, the *Antariksha* method, which is based on sky observation, is most popular.

Antariksha method

Varahamihira (505–587 AD) quotes rain conception period of six months from *Ashwin Krishna Paksha* [i.e, dark half of *Ashwin* (October–November)] to *Vaishakha Purnima* [i.e, full moon of *Vaishakha* (April–May)]. According to Varahamihira, if we observe specific symptoms in the atmosphere and sky, there will be delivery of rain after 190 to 195 days, in analogy with human reproduction. The symptoms of rain conception are given in Table 1. Numbers for symptoms were given according to their priority in rain conception process.

The observations of rainfall conception based on symptom nos. 1 to 16 taken for the period (approx. six months, i.e., 192 days) between *Ashwin Krishna Paksha* [dark half of *Ashwin* (October–November)] in 2003 to *Vaishakha Purnima* [full moon of *Vaishakha* (April–May)] in 2004 were used for daily prediction of rainfall during the ensuing monsoon season of 2004 for Barshi, Solapur district, Maharashtra. Similarly, the predictions for the monsoon season of 2005, 2006, 2007, and 2008 were made from rainfall conception observations. The overall average skill score for rainfall prediction during June to October in 2004–08 was 78.8% (Varshneya *et al.*, 2009). In general the skill score was good and it can be concluded that the rainfall prediction can be made successfully based on the rainfall conception observation with a better accuracy (Varshneya *et al.*, 2008). If we consider border cases of rainfall prediction, i.e., 192 (± 1) days, then average accuracy for these five years is 82.1%. Thus, it can be concluded that rainfall conception observations can be used successfully for rainfall prediction for that locality.