

热带湿润气候中的局地天气预报*

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摘 要 本文目的在于描述热带湿润气候中局地天气预报的各种方法。文中所给的结果在大多数情况下是可靠的。

关键词 局地天气 观测 预报

Local Weather Forecasting in a Humid Tropical Climate

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Abstract This research was done on demand and to document the methods of local weather forecasting in a humid tropical climate. The presented results are reliable more than 90% of the times.

Key words local weather observation forecasting

1 INTRODUCTION

Observation of animal behaviour, plant growth or the winds, clouds, stars and moon is an ancient and well-tried method of weather forecasting^[1]. Local weather forecasting is made from experience of observing weather and noting the similarities as well as the differences of certain characteristics of weather from day-to-day, week-to-week, month-to-month and year after year^[2]. Because of this repetition, the forecasters could predict the weather using the "other day" that resembled "today" and the future.

Local weather forecasting has been used from time immemorial especially as applied to rain making, or by farmers to have an insight when to clear their bushes for the approaching planting season or harvesting time. This study is about local weather forecasting in a humid climate of Nigeria. The country is located between latitudes 4°N and 14°N, longitudes 4°E and 14°E. It has three main climatic zones (humid, subhumid and semiarid) and with only two climatic seasons, wet and dry.

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2 METHODOLOGY AND RESULTS

This work was conducted by interviewing 300 respondents, mostly farmers (literate and illiterate) that are residing in a rural area, and have been there for at least ten years. The results documented in this study were from at least 90% of those sampled. Isolated observations on local weather forecasting were rejected. Some of the key methods of local weather forecasting in the study are listed below.

2.1 Onset of Harmattan

The harmattan is a weather phenomenon due to the dry North-Easterlies from the Sahara desert. It precedes rain or drizzle which is usually around late December. Over 95% of the respondents indicated that there is presence of strong, dry and chilly air which dries the nostrils. Haze and poor visibility is usually noticed in the early hours of the day. The disappearance of certain species of birds like hawk is also noticed.

2.2 Onset of Dry Season

Around late December and early January, the humidity is low with dry wind. Certain species of birds like hawk, kites can be seen in large numbers. Sporadic rainfall, low humidity and thunderstorm without rainfall are usually noticed. Also, the sun shines for a longer period uninterrupted by rain. Streams and lakes decrease in volume. There is blossoming of flowers like rose and lilies. Organisms like millipede start to crawl out of their holes in the ground.

2.3 Cessation of Dry Season

This takes place in the month of March. In this case, the blue sky disappears which is replaced by thick cloudy sky. Migratory birds like flamingoes also disappear. The atmosphere becomes less dusty. There is blowing of strong wind that is accompanied by lightening and thunder. Leaves turn greenish in a gradual process.

2.4 Onset of Wet Season

This takes place around the months of March and April. The atmosphere is usually gloomy, humid and there is frequent lightening and thunder. There is also unequal distributed rain and freshness of vegetation. There is disappearance of insects like dragon fly and some species of birds like hawks and kite. There is the growth of some edible species of mushroom. The weather is usually very hot in the afternoons.

2.5 Cessation of Wet Season

This takes place around the middle of October and is marked by flashes of lightening and roaring of thunder. There is strong wind that brings heavy rain that falls for a short time after which the atmosphere remains clear. The strong wind has capabilities of felling trees. The atmosphere is less gloomy in the mornings and the rains falls sporadically and mostly in the morning hours.

3 CONCLUSIONS

Local weather forecasting is practiced by the rural farmers especially, and does not require the data about the physical state of the atmosphere. It is based on observations over a long period of time. It is an ancient method of weather forecasting and well-tried.

The respondents in this study had at least 95% confidence in their observations. The immediate implication is that local forecasting of the weather, especially for the purpose of knowing the exact time to clear the farms, weed and harvest can be safely applied in data sparse regions of the world where the scientific predictions are not reliable most of the times.

REFERENCES

- 1 Page, R., 1980, *Weather Forecasting: the Country Way*, Penguin Books, London, 120pp.
- 2 Ayoade, J. O., 1988, *Introduction to Climatology for the Tropics*, Spectrum Books, Ibadan, Nigeria, 308pp.

首届“环境趋势与医学气象的发展”学术研讨会 将在黄山召开

20 世纪 90 年代以来,世界公认最迫切的全球热点问题是环境问题。1992 年各国元首、政府首脑和科学家在巴西里约热内卢召开了联合国环境与发展大会,我国国家领导人和科学家也参加了这次会议,会议通过了《环境与发展宣言》、《21 世纪议程》等重要文件,赫然把人类关注的焦点引向拯救地球——人类的生存条件、注重人类生活质量等重要议题。

在迎接 21 世纪到来之际,环境与发展问题已经从边缘走向中心,成为人类十分紧迫的研究课题。人类将面临的问题是一个气象、环境、医疗和保健等全球性高层次跨学科和交叉学科的研究课题,未雨绸缪,及时采取对策是摆在我们面前的主要任务。

首届“环境趋势与医学气象的发展”学术研讨会,由中国科学院大气物理研究所与中国老年医学委员会联合发起,中国科学院教育局等单位支持,中国科学院大气物理研究所承办。会议的主要议题是:

1. 人类生存的最佳环境气象条件;
2. 各种地方疾病与地理、地质、气象等环境条件的关系;
3. 环境趋势与医学气象方面前沿问题的研究成果;
4. 气候和环境变化对人体健康的影响;
5. 对各种地方疾病和流行性疾病的治疗与预防;
6. 改善人类生存环境条件的科学建议及对策;
7. 环境变化与医学气象的展望。

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会议日期: 1997 年 10 月 13~17 日

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