

## BAMBOO FLOWERING

**Sajal Saha**

Genetics & Plant breeding

Choudhary Charan Singh University, Meerut.

**Dr.Rinkey Arya**

PhD (Seed Science and Technology)

Dr.Yashwant Singh Parmar University of Horticulture and Forestry  
University Nauni, Himachal Pradesh.

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### INTRODUCTION

Bamboos are a diverse group of evergreen perennial flowering plants in the subfamily Bambusoideae of the grass family Poaceae. It is also called green gold. Bamboo occupies an unparalleled position in the plant kingdom in terms of its distribution, diversity and uses in the tropics and subtropics. The growing stock of bamboo is estimated at over a 100 million tonnes spread over forest areas, homesteads and private plantations. Of the 20 million tonnes harvested every year, almost three-fifth is from India and China. Bamboo has the peculiarity of flowering and seedling at the end of a very long vegetative growth phase the length of which is considered to be species specific. The flowering cycle of *Bambusa tulda*, *Dendrocalamus longipathus* and *Melocanna bambusoides* has been reported the cause of the famines known as “Mautam” and “Thingtam” in Mizoram. The flowering in Mizoram had caused 4 famines- 1815, 1863, 1911 and 1959.

### BAMBOO FLOWERING-

There are hundreds of species of bamboo in the world. Some flower every year, some at irregular intervals. But a small percentage flowers in synchrony, over hundreds of square kilometers, every few decades. Researchers aren't sure how it happens. "Science has to date not been able to explain how the same message is passed among bamboo clumps separated by hundred of kilometers to flower at the same time, said botanist H. Y. Mohan Ram of the University of Delhi, who is one of the country's foremost authorities on bamboo.



He speculates that the rhizomes of the bamboo have some kind of "memory" trait that makes the plants grow in synchronization, and then burst into bloom all at the same time. After the massive flowering, the bamboo clumps die, in what Mohan Ram calls "a kind of suicide by over-production. Bamboo plants die after flowering. It will be at least some years before bamboo plants take seed again, leaving bare exposed soil which could be disastrous in mountainous states and also leading to food scarcity, since animals depend on bamboo plants.

### **MULTIPLICATION OF RODENTS POPULATION**

The rodents feast on these flowers and seeds which are plentiful. Seeds are quite nutritious and even some believe that bamboo seed is also invigorating and has aphrodisiac qualities. The rodents are multiplied rapidly at an alarming rate - the bamboo blossom is such a good food source for them that when they eat it they can breed up to eight times a year - four times more often than normal. This activates increase body size among the rodents, which leads to the huge rat population. As a consequence, a sudden boom in the rat population.

The seeds of any culm of bamboo that might flower off-cycle are all eaten by rodents, thus reinforcing the rhythm of this extreme version of a mast year. Some experts believe that the flower has a positive effect on the fertility of the rats, as well as on increasing the viable size of a rat litter. All available explanations point to the fact that the increase in their numbers during the peak year is a natural after-effect of the flowering of the bamboos. Scientist are still confused and cant explained what are the nutritional attributes present in the bamboo seed and flowers.

### **RATS DESTROYED CROP IN NORTH EAST RESION**

Mautam (Mizo for "bamboo death") is a cyclic ecological phenomenon that occurs every 48 - 50 years in the north eastern Indian states of Mizoram and Manipur, Assam, Tripura which are 30% covered by wild bamboo forests.

It begins with a rat population boom, which in turn creates a widespread famine in those areas. During Mautam, *Melocanna baccifera*, a species of bamboo, flowers at one time across a wide area. This event is followed invariably by a plague of black rats in what is called a rat



flood. This occurs as the rats multiply in response to the temporary windfall of seeds, and leave the forests to forage on stored grain when the bamboo seeds are exhausted, which in turn causes devastating famine. Records from the British Raj indicate that Mizoram suffered famine in 1862 and again in 1911, after the region witnessed similar bamboo flowerings.

## **CONCLUSION**

Bamboo flowering puts world on famine alert. A plague of rats has destroyed the crops across the world. Due to increase the population of rats starvation created in South-Africa, Brazil, China, Bangladesh, India and other countries. Only in Bangladesh approx ten thousands of peoples are affected. Neighbouring states in India have suffered from the same problem. According to the UN Development Programme (UNDP) about 150,000 people living in the hills along the country's south-eastern border with India have been affected. "The rats are much bigger than usual. They eat everything that is fresh and green. The rodents have multiplied at an alarming rate - the bamboo blossom is such a good food source for them that when they eat it they can breed up to eight times a year - four times more often than normal. In India Mizoram has one dominant species of bamboo across much of the state. The flowering produces so much fruit that it causes an explosion in the rat population. However the flowers soon die, leaving the rats without abundant food from the bamboo. At this point, they begin attacking human crops and food stores.