

Management of Musth Indian Elephant at National Zoological Park, New Delhi

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A pair of Indian Elephants (*Elephas maximus*) about two years old was obtained from Kanpur Zoo on 13 April, 1980. The weight of the male elephant, Hiragaj, was 540 kg at the time of arrival. Sarma and Dutta (1996) and Cheeran *et al* (1991) report that winter season has been found to be the period of development of musth. Stracey (1991) also reported that a tusker in Nepal exhibited musth during every rainy season. Sabapara and Raval (1993) observed musth in Indian Elephant during summer. At National Zoological Park, Hiragaj came in musth in April 1998, matching the observations made by Sabapara and Raval (1993). This was Hiragaj's first musth period which started at the age of 20 years. It lasted for two months and 15 days. Kaimal (1996) also observed the occurrence of musth in elephants at the age between 21 and 80 years. The following observations were made about Hiragaj:

- 1. Pre-musth behaviour:** Prior to musth, the elephant's behaviour was unusual. He was more playful and refused to obey the orders of his mahout. At this time, the mahout felt that he would come in musth soon. Such behaviour occurs three or four days prior to the start of musth.
- 2. Period of musth:** Hiragaj remained in musth for 6 months and 20 days from 05 October, 2000 to 24 April, 2001. However this was not a continuous musth period but ranged from 4-5 days, in between which the elephant became normal.

A complete record of the recent musth period was kept:

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| (i) Beginning of musth | 28 January 2002 |
| (ii) Secretion from gland on | 31 January 2002 |
| (iii) Date of declining of musth | 27 April 2002 |
| (iv) Date of musth end | 14 May 2002 |
| (v) Duration of musth period | 3 months 17 days |

3. Changes observed during musth:

1. The weight of *Hiragaj* decreased
2. He did not keep penis erected, but continued to drip fluid called 'Tal'
3. Passed urine slowly and continuously
4. Intense aggressiveness
5. Did not allow mahout to come close
6. Remained in standing position
7. Loss of appetite
8. Pungent smelling secretion from both temporal glands
9. Swelling in the perineal region.

4. Diet

The elephants are given the following ration at National Zoological Park:

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| 1. Green Fodder | 200 kg/head |
| 2. Tree leaves | 60 kg/head |
| 3. Dry Fodder | 15 kg/head |
| 4. Banana | 24 nos./head |
| 5. Khichri | i. Gur 1 kg |
| | ii. Moong 1 kg |
| | iii. Rice 2 kg |
| | iv. Bajara 1 kg |
| | v. Haldi 0.100kg |

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| vi. Salt | 0.250 kg |
| vii. Mustard Oil | 0.250 kg |

(The above items are cooked in the form of "khichri")

5. During musth, diet for *Hiragaj* was changed to

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| 1. Green Fodder | 100 kg head |
| 2. Tree leaves | 30 kg head |
| 3. Dry Fodder | 30 kg head |
| 4. Banana | 24 nos. head |
| 5. Khichri | As usual |

6. Management problems

Hiragaj was tied by chain in the forelegs and right hind leg and remained in the enclosure measuring 7.30 x 4.50 x 4.55m. Feeding, cleaning of dung and bathing was done in the cell itself. As the elephant was aggressive, it was difficult to go near him for cleaning purpose, so a long iron rod with hooks was used to remove dung and push fodder.

The elephant remained chained continuously during the whole period of musth. It got injuries due to pressure of chain in the right hind leg. Immediate treatment could not be given because of aggressiveness. The injuries became more acute, pus was seen oozing out. Then it was decided to tranquillise it for control and treatment of wounds. On 27.04.2002 Hiragaj was tranquillised and became calm and quiet. The wound was thoroughly cleaned, dressing was given and the chain was shifted from right hind limb to left hind limb. During musth period, when his Mahout, Manoj Dodl, approached the elephant to provide fodder, it charged and hit him, causing injuries.

After the musth, Hiragaj's appetite improved and he had to be fed often. Mahout Babu Khan related that if elephants are given curd (2 kg) per head per day in khichri during musth period, they will calm down.

Musth in elephant is not an unusual phenomenon rather it is a physiological changes that is brought out by hormones.

References

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