



# The Feeding Habits of the National Bird, Indian Peafowl (*Pavo cristatus* L.), in Different Areas of the Bharatpur District of Rajasthan

Bhagat Singh<sup>1</sup>, Manju Lata<sup>1</sup>

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## ABSTRACT

**Background:** The Indian peafowl (*Pavo cristatus* L.), the national bird of India, is a widely distributed species known for its ecological adaptability and omnivorous feeding habits. It inhabits diverse environments such as forests, agricultural lands and urban areas. However, increasing human interference and habitat modification have influenced its feeding behavior and often led to conflicts with farmers. Understanding the feeding preferences of *P. cristatus* across different habitats is essential for its conservation and for minimizing human-peafowl conflicts.

**Methods:** To study the feeding preferences of Indian peafowl (*Pavo cristatus*) on different food types (trees, grasses, herbs, field crops and animals), data were collected based on the number of pecks per minute using binoculars from a safe distance. The feeding sites were revisited after feeding to confirm food types. Feeding habits were recorded using the point count method. The mean pecks per minute and standard errors were calculated by food type, location and month. Data were analyzed using one-way ANOVA in Minitab 11 for Windows.

**Result:** The Indian Peafowl is omnivorous, mainly feeding on herbs, crops and small animals. It consumes various tree parts, grasses and crops seasonally, with higher activity on plant matter. Animal diet includes insects, worms and small vertebrates across different months.

**Key words:** Crops, Feeding, Grasses and herbs, Indian peafowl, Tree species.

## INTRODUCTION

The name of the Indian peafowl was first assigned as *Pavo cristatus* by Carl Linnaeus in his work Linnaeus (1758). It is a Latin word that means “crested peafowl”. It was also termed maur in Sanskrit, Pali and modern Hindi. It is debated that the nomenclature of the Maurya Empire was raised and influenced by peacocks (Mookerji, 2016). It is a resident of the Indian subcontinent and prefers moist and dry-deciduous forests, but can live in cultivated regions near the water (Morishita *et al.*, 2022). Hatching chicks always follow their mother, leading them to a good food source. The chicks copy their mother to learn to feed on different foods (Grouw and Dekkers, 2023). The peafowl are omnivorous and feed on leaves, seeds, fruits, insects, worms, reptiles, frogs and small mammals (Fowler, 2022). They can also feed on small snakes (Johnsingh, 1976). Besides these, they also feed on tree and flower buds, petals, grasses and bamboo shoots (Fowler, 2022). They also live in human habitations and feed on a wide range of crops such as groundnut, tomato, paddy, chili, bananas and even on human excreta (Johnsingh and Murali, 1978; Naseer *et al.*, 2018; Yenilmez, 2020). During feeding, they remain close together in a small group on the ground, which consists of a single peacock with 3 to 5 peahens (Grimmett *et al.*, 1999; Hassan *et al.*, 2012; Fukuhara *et al.*, 2022; Khalid *et al.*, 2023; and Paranjpe *et al.*, 2023). The objective of this study is to analyse the feeding habits and food preferences of the Indian peafowl (*Pavo cristatus* L.)

<sup>1</sup>Department of Zoology, M.S.J. Govt. College, Bharatpur-321 001, Rajasthan, India.

**Corresponding Author:** Bhagat Singh, Department of Zoology, M.S.J. Govt. College, Bharatpur-321 001, Rajasthan, India.

Email: bpenghore@gmail.com

ORCID: 0009-0002-5953-8617

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in different habitat types of Bharatpur district, Rajasthan and to understand how seasonal changes and human activities influence their feeding behaviour.

## MATERIALS AND METHODS

### Study area

The observations on the feeding of Indian peafowl were recorded at three different places in the district Bharatpur, i.e., Village Saman in town Kumher, Kandholi in tehsil Rupbas and Anirudh Nagar in district Bharatpur (Fig 1). These experimental sites were selected for the study due to drastic changes in the environmental conditions. Village Saman (Kumher) has a natural and a wild habitat. In contrast, Kandholi is situated in the Valley of Arawali

Mountains and provides a rocky or hilly environment and Anirudh Nagar has some urban habitat for the Indian Peafowl. The data on the feeding of Indian peafowl were recorded in the year 2023-24 at all the experimental sites. The observations on feeding were recorded on different types of foods such as trees, grasses, field crops and animal food.

### Research methodology

To study the feeding preference of Indian peafowl on different foods such as trees, grasses, herbs, field crops and animals, the data were collected based on peck use by the *Pavo cristatus* per minute to feed on particular food. The observations on the number of pecks were taken with the help of binoculars from a particular distance without disturbing the Indian peafowl. To confirm the type of food, the place of feeding was also visited soon after the completion of feeding by the *Pavo cristatus* at all the experimental sites. The point count method was used to record the feeding habits of Indian Peafowl (Blondel *et al.*, 1981).

The collected data were tabulated by using the mean value of the peck per minute and standard error concerning the food, place and month of the experimental year. The overall data were also subjected to one-way ANOVA by using the statistical software Minitab 11 for Windows. Peafowl was directly observed under natural conditions during three time periods: 0600-1000 hrs, 1000-1400 hrs and 1400-1800 hrs respectively. Observations were recorded in a field notebook and the duration of each observation was noted with a stopwatch.

## RESULTS AND DISCUSSION

The Indian Peafowl is omnivorous and feeds on seeds, insects, fruits, small mammals and reptiles. The present study revealed that Indian Peafowl spends more time feeding on different types of herb matter than animal matter. Similar observations were recorded (Navneethakannan, 1981). Under the binocular study, feeding of Indian peafowl has been observed on different parts of the tree *i.e.* leaf and fruit of Aam; leaf and flower of Babul; leaf and fruit of Bargad; leaf, flower and fruit of Ber; the fruit of Gular; leaf and fruit of Imli; leaf, flower and fruit of Jamun; leaf and fruit of Neem; leaf and fruit of Pakar; flower and fruit of Peelu; leaf and fruit of Peepal and leaf of Shisham.

The comparative study on feeding showed that Indian peafowl remains active from February to August on the mango (Aam) tree, June to October on the Babul tree, April to July on the banyan (Bargad) tree, July to October on jujube (Ber) tree, March to June on Gular, April to October on tamarind (Imli), March to June on Jamun, February to September on Neem tree, March to May on Pakar tree, March to June on meswak (Peelu) tree, January to May on peepal tree and also on rosewood (Shisham), (Table 1).

The Indian peafowl remain active from March to November on Doob grass, August to February on

Knotgrass, September to December on Khas khas grass, May to October on Smut grass, March to May and September to December on Dudhi, September to December on Ban methi, April to November on Aak, April to August on Karavira, May to September on Datura, July to October on Makoi, October to March on Tulsi and January to March on Bathua (Table 2).

The feeding of Indian peafowl was actively seen from December to March on Wheat, November to February on Gram, May to August on Maize, November to February on Barley, August to December on Sweet potato, March to June on Melon, November to February on Mustard and again November to February on Pea, August to November on Brinjal, November to February on Cauliflower, further November to February on Bean, April to August and November to February on Chilli, July to September and November to February on Tomato, November to February on Carrot and February to April on Cucumber (Table 3 and Fig 2).

Besides plant products, Indian peafowl also feed on animal products at Village Saman (Kumher). These animal foods include ants, grasshoppers, termites, grubs, cockroaches, spiders, bugs, earthworms, scorpions, small rodents, small lizards and small snakes. They actively feed on ants from March to October, on grasshoppers March to November, on termites from March to April and July to November, on grubs from October to January, on cockroaches from March to April and July to September, on spider April to September, on bugs January to April, on

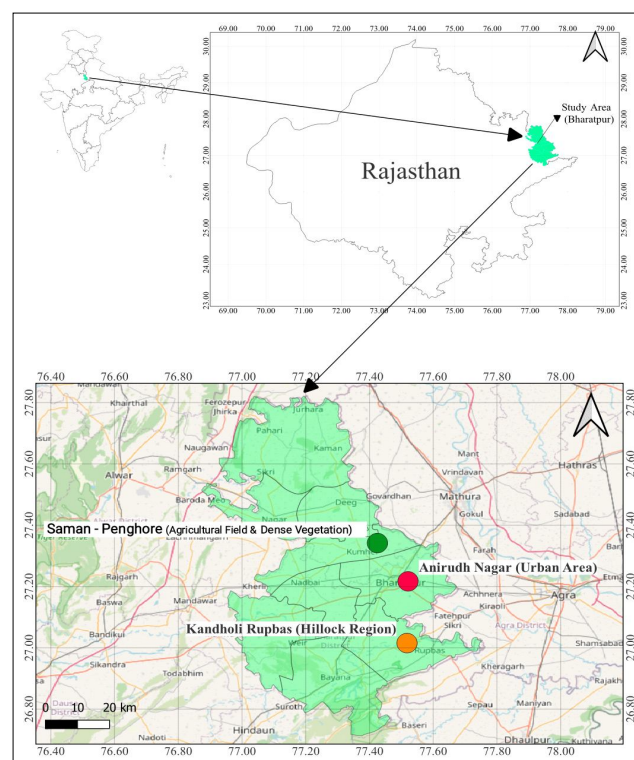


Fig 1: Map of study area.

**Table 1:** Feeding of *Pavo cristatus* on different trees at different sites during the year 2023-24.

| Food trees                     | September     | October       | November | December | January       | February      | March         | April         | May           | June          | July          | August        | Eating parts |
|--------------------------------|---------------|---------------|----------|----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|
| Aam,                           | *             | *             | *        | *        | *             | 24.00±0.5     | 30.00±0.71    | 40.00±0.71    | 42.00±0.84    | 46.00±0.71    | 52.00±1.05    | 48.00±0.71    | L, Fr        |
| <i>Mangifera indica</i>        |               |               |          |          |               | 5 (23-26)     | (28-32)       | (38-42)       | (39-44)       | (44-48)       | (49-54)       | (46-50)       |              |
| Babul,                         | 36.00±0.55    | 30.00±0.45    | *        | *        | *             | *             | *             | *             | *             | 30.00±0.55    | 34.00±0.55    | 36.00±0.45    | L, Fl        |
| (35-38)                        |               | (29-31)       |          |          |               |               |               |               |               | (28-31)       | (33-36)       | (35-37)       |              |
| <i>Acacia nilotica</i>         |               |               |          |          |               |               |               |               |               |               |               |               |              |
| Bargad,                        | *             | *             | *        | *        | *             | *             | *             | 24.00±0.32    | 36.00±0.45    | 46.00±0.32    | 44.00±0.32    | *             | L, Fr        |
| <i>Ficus benghalensis</i>      |               |               |          |          |               |               |               | (23-25)       | (35-37)       | (45-47)       | (43-45)       |               |              |
| Ber. <i>Ziziphus</i>           | 38.00±0.55    | 28.00±0.32    | *        | *        | *             | *             | *             | *             | *             | *             | 42.00±0.32    | 44.00±0.45    | L, Fl, Fr    |
| (37-40)                        |               | (27-29)       |          |          |               |               |               |               |               |               | (41-43)       | (43-45)       |              |
| <i>mauritiana</i>              | *             | *             | *        | *        | *             | *             | 32.00±0.45    | 40.00±0.55    | 44.00±0.55    | 42.00±0.63    | *             | *             | Fr           |
| Gular, <i>Ficus glomerata</i>  |               |               |          |          |               |               | (31-33)       | (39-42)       | (43-46)       | (41-44)       |               |               |              |
| Imli, <i>Tamarindus indica</i> | 46.00±0.32    | 44.00±0.45    | *        | *        | *             | *             | *             | 24.00±0.32    | 32.00±0.45    | 36.00±0.55    | 40.00±0.55    | 42.00±0.55    | L, Fr        |
| (45-47)                        |               | (43-45)       |          |          |               |               |               | (23-25)       | (31-33)       | (35-38)       | (39-42)       | (41-44)       |              |
| Jamun,                         | *             | *             | *        | *        | *             | *             | 24.00±0.45    | 28.00±0.32    | 48.00±0.55    | 52.00±0.55    | *             | *             | L, Fl, Fr    |
|                                |               |               |          |          |               |               | (23-25)       | (27-29)       | (47-50)       | (50-55)       |               |               |              |
| <i>Syzygium cumini</i>         |               |               |          |          |               |               |               |               |               |               |               |               |              |
| Neem,                          | 36.00±0.45    | *             | *        | *        | *             | 20.00±0.32    | 24.00±0.45    | 28.00±0.32    | 30.00±0.55    | 34.00±0.55    | 36.00±0.32    | 38.00±0.32    | L, Fr        |
| (35-37)                        |               |               |          |          |               | (19-21)       | (23-25)       | (27-29)       | (28-31)       | (33-36)       | (35-37)       | (37-39)       |              |
| <i>Azadirachta indica</i>      |               |               |          |          |               |               |               |               |               |               |               |               |              |
| Pakar, <i>Ficus lacor</i>      | *             | *             | *        | *        | *             | *             | 20.00±0.45    | 26.00±0.32    | 32.00±0.55    | *             | *             | *             | L, Fr        |
|                                |               |               |          |          |               |               | (19-21)       | (25-27)       | (30-33)       |               |               |               |              |
| Peelu,                         | *             | *             | *        | *        | *             | *             | 24.00±0.45    | 28.00±0.45    | 32.00±0.71    | 34.00±0.45    | *             | *             | Fl, Fr       |
|                                |               |               |          |          |               |               | (23-25)       | (27-29)       | (30-34)       | (33-35)       |               |               |              |
| <i>Salvadora oleoides</i>      |               |               |          |          |               |               |               |               |               |               |               |               |              |
| Peepal, <i>Ficus religiosa</i> | *             | *             | *        | *        | 22.00±0.55    | 28.00±0.55    | 30.00±0.63    | 34.00±0.55    | 36.00±0.45    | *             | *             | *             | L, Fr        |
|                                |               |               |          |          | (20-23)       | (26-29)       | (28-32)       | (32-35)       | (35-37)       |               |               |               |              |
| Shisham,                       | *             | *             | *        | *        | 22.00±0.55    | 24.00±0.45    | 28.00±0.55    | 32.00±0.55    | 32.00±0.45    | *             | *             | *             | L            |
|                                |               |               |          |          | (20-24)       | (23-25)       | (26-29)       | (30-33)       | (31-33)       |               |               |               |              |
| <i>Dalbergia sissoo</i>        |               |               |          |          |               |               |               |               |               |               |               |               |              |
| F, df and                      | 80            | 570           | -        | -        | 0             | 80            | 59            | 254           | 130           | 164           | 120           | 88            | -            |
| P value                        | 3.19          | 2.14          | -        | -        | 1.9           | 3.19          | 7.39          | 9.49          | 9.49          | 7.39          | 5.29          | 4.24          | -            |
|                                | $P \leq 0.05$ | $P \leq 0.05$ | -        | -        | $P \leq 0.05$ | $P \leq 0.05$ | $P \leq 0.05$ | $P \leq 0.05$ | $P \leq 0.05$ | $P \leq 0.05$ | $P \leq 0.05$ | $P \leq 0.05$ | -            |
| LSD value                      | 1.83          | 1.54          | -        | -        | 1.39          | 1.26          | 1.25          | 0.77          | 1.10          | 1.37          | 1.58          | 1.53          | -            |

Given value is number of peck/min  $\pm$  Standard error and value in parenthesis is range.

(Abbreviation L= Leaf, Fl= Flower, Fr= Fruit).

\*Discrepant season (Leafs or flower or fruits not available at experimental site).

**Table 2:** Feeding of *Pavo cristatus* on different herbs and grasses at Saman (Kumher) during the year 2023-24.

| Grasses and herbs                               | September                     | October                      | November                     | December                      | January                       | February                      | March                         | April                         | May                           | June                         | July                         | August                       | Eating parts |
|-------------------------------------------------|-------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|------------------------------|--------------|
| Doob grass, <i>Cynodon dactylon</i>             | 34.00±0.45 (33-35)            | 36.00±0.45 (35-37)           | 22.00±0.45 (21-23)           | 0                             | 0                             | 0                             | 16.00±0.32 (15-17)            | 18.00±0.45 (17-19)            | 22.00±0.32 (21-23)            | 22.00±0.45 (21-23)           | 24.00±0.45 (23-25)           | 28.00±0.45 (27-29)           | S, Rh        |
| Knotgrass, <i>Paspalum distichum</i>            | 0                             | 20.00±0.55 (19-22)           | 22.00±0.45 (21-23)           | 24.00±0.32 (23-25)            | 28.00±0.45 (27-29)            | 28.00±0.45 (27-29)            | *                             | *                             | *                             | *                            | *                            | 16.00±0.32 (15-17)           | S, Rh        |
| Khas khas grass, <i>Chrysopogon zizanioides</i> | 18.00±0.32 (17-19)            | 28.00±0.45 (27-29)           | 30.00±0.45 (29-31)           | 26.00±0.32 (25-27)            | *                             | *                             | *                             | *                             | *                             | *                            | 0                            | 0                            | L            |
| Smut grass, <i>Sporobolus indicus</i>           | 30.00±0.45 (29-31)            | 32.00±0.55 (31-34)           | *                            | *                             | 0                             | 0                             | 0                             | 0                             | 18.00±0.32 (17-19)            | 20.00±0.45 (19-21)           | 26.00±0.45 (25-27)           | 28.00±0.32 (27-29)           | L            |
| Dudhi, <i>Euphorbia orbiculata</i>              | 24.00±0.32 (23-25)            | 24.00±0.32 (23-25)           | 26.00±0.32 (25-27)           | 24.00±0.32 (23-25)            | 0                             | 0                             | 32.00±0.45 (31-33)            | 36.00±0.32 (35-37)            | 36.00±0.45 (35-37)            | *                            | *                            | *                            | L, Fl        |
| Ban methi, <i>Melilotus indica</i>              | 28.00±0.32 (27-29)            | 32.00±0.45 (31-33)           | 32.00±0.45 (31-33)           | 26.00±0.32 (25-27)            | 0                             | 0                             | 0                             | *                             | *                             | *                            | *                            | *                            | L, Fl        |
| Aak, <i>Catalopsis procera</i>                  | 32.00±0.45 (31-33)            | 28.00±0.45 (27-29)           | 16.00±0.45 (15-17)           | 0                             | 0                             | 0                             | 0                             | 14.00±0.32 (13-15)            | 16.00±0.32 (15-17)            | 18.00±0.45 (17-19)           | 20.00±0.45 (19-21)           | 26.00±0.55 (24-27)           | Fl           |
| Karavira, <i>Nerium indicum</i>                 | *                             | *                            | *                            | *                             | *                             | *                             | *                             | 34.00±0.32 (33-35)            | 36.00±0.45 (35-37)            | 30.00±0.45 (29-31)           | 22.00±0.32 (21-23)           | 16.00±0.32 (15-17)           | L, Fl        |
| Datura, <i>Datura metel</i>                     | 28.00±0.32 (27-29)            | 0                            | 0                            | 0                             | 0                             | 0                             | 0                             | 0                             | 16.00±0.32 (15-17)            | 18.00±0.32 (17-19)           | 26.00±0.45 (25-27)           | 28.00±0.32 (27-29)           | Fl           |
| Makoi, <i>Solanum nigrum</i>                    | 34.00±0.45 (33-35)            | 34.00±0.32 (33-35)           | *                            | *                             | *                             | *                             | *                             | *                             | *                             | *                            | 20.00±0.32 (19-21)           | 26.00±0.45 (25-27)           | Fl, Fr       |
| Tulsi, <i>Ocimum sanctum</i>                    | 0                             | 20.00±0.32 (19-21)           | 22.00±0.45 (21-23)           | 24.00±0.45 (23-25)            | 24.00±0.63 (22-25)            | 28.00±0.45 (27-29)            | 30.00±0.55 (28-31)            | *                             | *                             | *                            | *                            | *                            | L, Fl        |
| Bathua, <i>Chenopodium album</i>                | *                             | *                            | *                            | *                             | 22.00±0.45 (21-23)            | 24.00±0.45 (23-25)            | 28.00±0.32 (27-29)            | *                             | *                             | *                            | *                            | *                            | L, Fl, Fr    |
| F, df and P value                               | 1332<br>9.49<br>$P \leq 0.05$ | 719<br>9.49<br>$P \leq 0.05$ | 723<br>7.39<br>$P \leq 0.05$ | 3088<br>7.39<br>$P \leq 0.05$ | 1635<br>8.44<br>$P \leq 0.05$ | 3307<br>8.44<br>$P \leq 0.05$ | 2712<br>7.39<br>$P \leq 0.05$ | 3230<br>5.29<br>$P \leq 0.05$ | 1094<br>5.29<br>$P \leq 0.05$ | 146<br>4.24<br>$P \leq 0.05$ | 764<br>6.34<br>$P \leq 0.05$ | 933<br>7.39<br>$P \leq 0.05$ | -<br>-<br>-  |
| LSD Value                                       | 0.72                          | 0.80                         | 0.85                         | 0.53                          | 0.66                          | 0.50                          | 0.66                          | 0.74                          | 0.78                          | 1.24                         | 0.81                         | 0.75                         | -            |

Given value is number of peck/min  $\pm$  Standard error and value in parenthesis is range (Abbreviation S= Seed, Rh= Rhizome, L= Leaf, Fl= Flower, Fr= Fruit). (Abbreviation S= Seed, Rh= Rhizome).

**Table 3:** Feeding of *Pavo cristatus* on different crops at saman (Kumher) during the year 2023-24.

| Crops                                  | September             | October               | November              | December              | January               | February              | March                 | April                 | May                   | June                  | July                  | August                | Eating parts |
|----------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------|
| Wheat, <i>Triticum aestivum</i>        | *                     | *                     | 0                     | 26.00±0.32<br>(25-27) | 30.00±0.45<br>(29-31) | 36.00±0.45<br>(35-37) | 40.00±0.45<br>(39-41) | *                     | *                     | *                     | *                     | *                     | L, Fr        |
| Gram, <i>Cicer arietinum</i>           | *                     | 0                     | 28.00±0.32<br>(27-29) | 30.00±0.45<br>(29-31) | 38.00±0.45<br>(37-39) | 42.00±0.45<br>(41-43) | *                     | *                     | *                     | *                     | *                     | *                     | L, Fl, Fr    |
| Maize, <i>Zea mays</i>                 | *                     | *                     | *                     | *                     | *                     | *                     | *                     | *                     | 24.00±0.32<br>(23-25) | 28.00±0.45<br>(27-29) | 34.00±0.45<br>(33-35) | 40.00±0.45<br>(39-41) | L, Fr        |
| Barley, <i>Hordeum vulgare</i>         | *                     | 0                     | 8.00±0.32<br>(7-9)    | 18.00±0.32<br>(17-19) | 26.00±0.32<br>(24-26) | 24.00±0.45<br>(23-25) | *                     | *                     | *                     | *                     | *                     | *                     | L, Fl, Fr    |
| Sweet potato, <i>Ipomoea batatas</i>   | 20.00±0.32<br>(19-21) | 28.00±0.45<br>(27-29) | 24.00±0.45<br>(23-25) | 16.00±0.32<br>(15-17) | *                     | *                     | *                     | *                     | *                     | *                     | 0                     | 8.00±0.32<br>(7-9)    | L, Fr        |
| Melon, <i>Cucumis melo</i>             | *                     | *                     | *                     | *                     | *                     | 0                     | 8.00±0.32<br>(7-9)    | 12.00±0.32<br>(10-12) | 26.00±0.45<br>(25-27) | 28.00±0.45<br>(27-29) | *                     | *                     | L, Fl, Fr    |
| Mustard, <i>Brassica juncea</i>        | *                     | 0                     | 16.00±0.32<br>(15-17) | 22.00±0.32<br>(21-23) | 36.00±0.45<br>(35-37) | 40.00±0.45<br>(39-41) | *                     | *                     | *                     | *                     | *                     | *                     | L, Fl, Fr    |
| Pea, <i>Pisum sativum</i>              | *                     | 0                     | 14.00±0.32<br>(13-15) | 18.00±0.45<br>(17-19) | 32.00±0.32<br>(31-33) | 34.00±0.45<br>(33-35) | *                     | *                     | *                     | *                     | *                     | *                     | L, Fl, Fr    |
| Brinjal, <i>Solanum melongena</i>      | 32.00±0.45<br>(31-33) | 36.00±0.45<br>(35-37) | 30.00±0.45<br>(29-31) | *                     | *                     | *                     | *                     | *                     | *                     | *                     | 0                     | 20.00±0.32<br>(19-21) | L, Fl, Fr    |
| Cauliflower, <i>Brassica oleracea</i>  | *                     | 0                     | 14.00±0.32<br>(13-15) | 18.00±0.45<br>(17-19) | 32.00±0.45<br>(31-33) | 34.00±0.45<br>(33-35) | *                     | *                     | *                     | *                     | *                     | *                     | L, Fl        |
| var. <i>botrytis</i>                   | *                     | 0                     | 10.00±0.32<br>(9-11)  | 16.00±0.32<br>(15-17) | 30.00±0.45<br>(29-31) | 26.00±0.45<br>(25-27) | *                     | *                     | *                     | *                     | *                     | *                     | L, Fr        |
| Spinacea <i>oleracea</i>               | *                     | 0                     | 14.00±0.32<br>(13-15) | 18.00±0.45<br>(17-19) | 30.00±0.37<br>(29-31) | 32.00±0.32<br>(31-33) | *                     | 8.00±0.32<br>(7-9)    | 16.00±0.45<br>(15-17) | 20.00±0.45<br>(19-21) | 28.00±0.45<br>(27-29) | 32.00±0.45<br>(31-33) | L, Fl, Fr    |
| Chilli, <i>Capsicum annum</i>          | *                     | *                     | 16.00±0.32<br>(15-17) | 20.00±0.45<br>(19-21) | 32.00±0.45<br>(31-33) | 34.00±0.32<br>(33-35) | *                     | *                     | *                     | 0                     | 12.00±0.32<br>(11-13) | 18.00±0.45<br>(17-19) | L, Fl, Fr    |
| Tomato, <i>Lycopersicon esculentum</i> | 28.00±0.45<br>(27-29) | *                     | *                     | *                     | *                     | *                     | *                     | *                     | *                     | *                     | *                     | *                     |              |

Table 3: Continue..

Table 3: Continue..

|                                               | *                            | 0                             | 18.00±0.32<br>(17-19)         | 26.00±0.45<br>(25-27)         | 32.00±0.45<br>(31-33)         | 28.00±0.45<br>(27-29)          | *                             | *                            | *                            | *                             | *                             | *                             | * | * | * | L, Fr     |
|-----------------------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|---|---|---|-----------|
| Carrot,<br><i>Daucus</i><br><i>carota</i>     | *                            |                               |                               |                               |                               |                                |                               |                              |                              |                               |                               |                               |   |   |   | L, Fr     |
| Cucumber,<br><i>Cucumis</i><br><i>sativus</i> | *                            | *                             | *                             | *                             | 0                             | 14.00±0.32<br>(13-15)          | 24.00±0.45<br>(23-25)         | 22.00±0.45<br>(21-23)        | *                            | *                             | *                             | *                             | * | * | * | L, Fr, Fr |
| F, df and<br>P value                          | 560<br>2,14<br>$P \leq 0.05$ | 4640<br>9,49<br>$P \leq 0.05$ | 839<br>11,59<br>$P \leq 0.05$ | 167<br>10,54<br>$P \leq 0.05$ | 648<br>10,54<br>$P \leq 0.05$ | 1107<br>11,59<br>$P \leq 0.05$ | 2194<br>2,14<br>$P \leq 0.05$ | 466<br>2,14<br>$P \leq 0.05$ | 240<br>2,14<br>$P \leq 0.05$ | 1612<br>3,19<br>$P \leq 0.05$ | 2747<br>4,24<br>$P \leq 0.05$ | 1161<br>4,24<br>$P \leq 0.05$ |   |   |   |           |
| LSD value                                     | 1.09                         | 0.41                          | 0.53                          | 0.70                          | 0.77                          | 1.69                           | 1.43                          | 1.44                         | 1.44                         | 1.13                          | 0.90                          | 1.10                          |   |   |   |           |

Given value is number of pecks/min±Standard error and value in parentheses is range. \* Discrepant season (animals not available at experimental site).

earthworms July to September, on scorpions April to July, on small rodents April to September, on small lizards May to July and on small snakes July to September (Table 4).

The comparative study showed that it preferred aam (*Mangifera indica*), imli (*Tamarindus indica*), jamun (*Syzygium cumini*) and gular (*Ficus glomerata*) tree species at all the survey sites. It was interestingly noticed that, in the absence of food on the above-mentioned tree species, they could be shifted to shisham (*Dalbergia sissoo*), peepal (*Ficus religiosa*) and also on Neem (*Azadirachta indica*) for feeding at the survey sites of Village Saman (Kumher), Kandholi (Rupbas) and Anirudh Nagar (Bharatpur), respectively. As far as grasses and herbs were concerned, they commonly fed a maximum of doob grass (*Cynodon dactylon*), knotgrass (*Paspalum distichum*), dudhi (*Euphorbia orbiculata*) and tulsi (*Ocimum sanctum*). However, the feeding also varied with the change of experimental site. Indian peafowl showed specific feeding on ban methi (*Melilotus indica*), kiaravira (*Nerium indicum*) at Village Saman (Kumher) and makoi (*Solanum nigrum*) and aak (*Calatropis procera*) at Kandholi (Rupbas) and Anirudh Nagar (Bharatpur), respectively. Moreover, when the field crops were available, it showed a preference for feeding on gram (*Cicer arietinum*), followed by wheat (*Triticum aestivum*) and maize (*Zea mays*) at all the experimental sites. However, it can survive and feed on every field crop studied in the present research. Still, preference for feeding brinjal (*Solanum melongena*), mustard (*Brassica juncea*) and cucumber (*Cucumis sativus*) was also observed at Village Saman (Kumher) and Kandholi (Rupbas), respectively.

Besides plant products, it may also feed on various types of animal food (Fig 3), during the present research twelve types of animal food were noted as the food of *Pavo cristatus* viz., cockroaches, ants, grasshoppers, termites, grubs, bugs, spiders, earthworms, scorpions, small rodents, small lizards and small snakes. Among these animal products, the highest feeding preference was



Fig 2: Feeding of indian peafowl on grasses and herbs.

**Table 4:** Feeding of *Pavo cristatus* on different animal food at different sites during the year 2023-24.

| Food animals      | September                     | October                        | November                     | December                     | January                      | February                      | March                         | April                         | May                           | June                          | July                          | August                       |
|-------------------|-------------------------------|--------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|
| Ants              | 32.00±0.71<br>(30-34)         | 28.00±0.32<br>(27-29)          | 0                            | *                            | 0                            | 0                             | 25.00±0.32<br>(24-26)         | 28.00±0.32<br>(27-29)         | 32.00±0.32<br>(32-34)         | 38.00±0.45<br>(37-39)         | 36.00±0.45<br>(33-36)         | 33.00±0.45<br>(30-36)        |
| Grasshoppers      | 8.00±0.32<br>(7-9)            | 12.00±0.32<br>(11-13)          | 6.00±0.32<br>(5-7)           | 0                            | *                            | *                             | 8.00±0.45<br>(7-9)            | 12.00±0.55<br>(10-13)         | 6.00±0.32<br>(5-7)            | 0                             | 7.00±0.32<br>(6-8)            | 10.00±0.45<br>(9-11)         |
| Termites          | 30.00±0.32<br>(29-31)         | 26.00±0.32<br>(25-27)          | 4.00±0.45<br>(3-5)           | *                            | *                            | *                             | 12.00±0.32<br>(11-13)         | 28.00±0.45<br>(27-29)         | *                             | *                             | 24.00±0.45<br>(23-25)         | 26.00±0.45<br>(25-27)        |
| Grubs             | *                             | 12.00±0.32<br>(11-13)          | 16.00±0.45<br>(15-17)        | 18.00±0.32<br>(17-19)        | 16.00±0.32<br>(15-17)        | *                             | *                             | *                             | *                             | *                             | *                             | *                            |
| Cockroach         | 5.00±0.32<br>(4-6)            | 2.00±0.32<br>(1-3)             | 0                            | *                            | *                            | *                             | 3.00±0.32<br>(2-4)            | 6.00±0.45<br>(5-7)            | *                             | *                             | 5.00±0.32<br>(4-6)            | 4.00±0.45<br>(3-5)           |
| Spider            | 6.00±0.45<br>(5-7)            | 0                              | 0                            | *                            | *                            | *                             | 0                             | 8.00±0.45<br>(7-9)            | 8.00±0.32<br>(7-9)            | 7.00±0.32<br>(6-8)            | 7.00±0.45<br>(6-8)            | 6.00±0.45<br>(5-7)           |
| Bugs              | *                             | *                              | *                            | *                            | 6.00±0.45<br>(5-7)           | 12.00±0.32<br>(11-13)         | 15.00±0.32<br>(14-16)         | 13.00±0.45<br>(12-14)         | *                             | *                             | *                             | *                            |
| Earthworms        | 3.00±0.32<br>(2-4)            | 0                              | *                            | *                            | *                            | *                             | *                             | 0                             | 0                             | 0                             | 4.00±0.32<br>(3-5)            | 5.00±0.45<br>(4-6)           |
| Scorpions         | 0                             | 0                              | *                            | *                            | *                            | *                             | 0                             | 1.00±0.32<br>(0-2)            | 1.00±0.32<br>(0-2)            | 1.00±0.32<br>(0-2)            | 1.00±0.32<br>(0-2)            | 0                            |
| Rodents (small)   | 1.00±0.32<br>(0-2)            | 0                              | 0                            | *                            | *                            | 0                             | 0                             | 1.00±0.32<br>(0-2)            | 0                             | 1.00±0.32<br>(0-2)            | 2.00±0.32<br>(1-3)            | 2.00±0.45<br>(1-3)           |
| Lizards (small)   | 0                             | 0                              | *                            | *                            | *                            | *                             | 0                             | 0                             | 2.00±0.32<br>(1-3)            | 2.00±0.45<br>(1-3)            | 2.00±0.32<br>(1-3)            | 0                            |
| Snakes (small)    | 1.00±0.32<br>(0-2)            | 0                              | *                            | *                            | *                            | *                             | *                             | 0                             | 0                             | 0                             | 1.00±0.32<br>(0-2)            | 1.00±0.32<br>(0-2)           |
| F, df and P value | 1211<br>9,49<br>$P \leq 0.05$ | 3140<br>10,54<br>$P \leq 0.05$ | 493<br>6,34<br>$P \leq 0.05$ | 3240<br>1,9<br>$P \leq 0.05$ | 784<br>2,14<br>$P \leq 0.05$ | 1440<br>2,14<br>$P \leq 0.05$ | 1445<br>8,44<br>$P \leq 0.05$ | 984<br>10,54<br>$P \leq 0.05$ | 1856<br>7,39<br>$P \leq 0.05$ | 1957<br>7,39<br>$P \leq 0.05$ | 1187<br>9,49<br>$P \leq 0.05$ | 588<br>9,49<br>$P \leq 0.05$ |
| LSD value         | 0.71                          | 0.38                           | 0.77                         | 1.39                         | 1.22                         | 0.77                          | 0.50                          | 0.65                          | 0.60                          | 0.68                          | 0.68                          | 0.95                         |

Given value is number of peck/min±Standard error and value in parenthesis is range. \*Discrepant season (Animals not available at experimental site).



**Fig 3:** Feeding of indian Peafowl on household wastes and animal matter.

noticed for ants, followed by ants, grasshoppers, bugs and also for termites. At some places like Village Saman (Kumher) and Kandholi (Rupbas), it is also found to feed on small snakes but maintains quite a distance from large ones. However, some food also remained unidentified and is the topic of future research.

## CONCLUSION

The study revealed that *Pavo cristatus* (Indian peafowl) is omnivorous and thrives in diverse habitats, including plains, hills and human-inhabited areas. Its feeding preference varies with location and season. The species mainly feeds on tree parts of mango (*Mangifera indica*), tamarind (*Tamarindus indica*), jamun (*Syzygium cumini*) and gular (*Ficus glomerata*), along with grasses like doob (*Cynodon dactylon*) and tulsi (*Ocimum sanctum*) and field crops such as gram, wheat and maize. Additionally, it consumes insects, worms and small vertebrates for protein. These plant and animal foods provide vital nutrients, vitamins and minerals essential for growth, reproduction and maintaining body energy.

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## Disclaimers

The views and conclusions expressed in this article are solely those of the authors and do not necessarily represent the views of their affiliated institutions. The authors are responsible for the accuracy and completeness of the information provided, but do not accept any liability for any direct or indirect losses resulting from the use of this content.

## Informed consent

All animal procedures for experiments were approved by the Committee of Experimental Animal care and handling

techniques were approved by the University of Animal Care Committee.

## Conflict of interest

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