

Emerging Trends of Reproductive Success of Grey Francolin

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Abstract

The Grey Francolin (*Francolinus pondicerianus*) is an important ground-dwelling bird species associated with agricultural landscapes, grasslands, scrublands, and semi-arid ecosystems of South Asia. Reproductive success is a critical indicator of population stability and is influenced by habitat quality, food availability, climatic conditions, predation pressure, breeding behaviour, and human activities. This paper examines emerging trends in the reproductive success of the Grey Francolin, with particular emphasis on changing environmental conditions and habitat characteristics. Factors such as temperature fluctuations, rainfall variability, vegetation cover, availability of nesting sites, and agricultural practices can affect breeding timing, clutch size, hatching success, chick survival, and overall recruitment. Increasing agricultural intensification, pesticide use, habitat modification, and disturbance may reduce the availability of suitable nesting and feeding habitats, potentially influencing reproductive outcomes. At the same time, heterogeneous agricultural landscapes, protected patches of vegetation, and appropriate habitat-management practices can provide important resources for breeding populations. Recent ecological approaches increasingly emphasize the relationship between reproductive performance and landscape-level habitat conditions rather than considering individual nesting sites in isolation. Monitoring breeding populations over multiple seasons can help identify changes in reproductive patterns and distinguish natural variation from longer-term environmental trends. The study highlights the importance of maintaining suitable vegetation, minimizing disturbance during the breeding season, promoting ecologically sensitive agricultural practices, and conserving habitat mosaics. Understanding these emerging reproductive trends can contribute to effective conservation planning and provide valuable insights into the ecological health of semi-arid and agricultural ecosystems supporting the Grey Francolin.

Keywords: Grey Francolin, *Francolinus pondicerianus*, Reproductive Success, Breeding Ecology, Nesting, Habitat Quality, Climate Variability, Agricultural Landscape, Conservation, Population Ecology.