**Potential of sandgrouse (Aves: Pteroclididae) for future prospects for food security and nutrition in rural resource-poor arid areas**

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Possibilities of domesticating certain wild birds have been suggested many years ago. Several of such species exhibit qualities that might make them suitable for sustained production. Collectively, poultry have become the most useful of all livestock—and the most widespread. Yet only a handful of species are employed. Of the 10,000 extant bird species, only a few (e.g., chickens, ducks, geese, pigeons, and turkeys) have been domesticated for farm use. Poultry meat is in ever-increasing demand, but there are many niches where the main species are subject to disease, or are affected by humidity, altitude, heat problems, or other risks. For such areas, a new species might become a vital future food resource. In arid hot environments, Sandgrouse are a unique family of birds with multiple adaptations that allow them to survive in extremely harsh conditions ([water shortage](https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/water-shortages), extreme heat flows, and low biological productivity). They are granivorous and live in flocks, which makes them likely to be easy to feed and to keep in crowded conditions. Morocco has a comparatively rich sandgrouse fauna of five species among the 14 Afro-Eurasian species of the genus *Pterocles*: three pre-saharan and two arid/semiarid steppeland species. We conducted an experimental captive breeding of the Black-bellied sandgrouse, *P. orientalis*, the largest species. Flock breeders originated from wild-laid eggs collected in west-central Morocco, were hatched and hand-reared in captivity. Pairs of different age were housed in an aviary. Egg-pulling procedure was used and eggs incubated artificially. Breeding parameters, hatchability and post-hatching mortality were recorded. The Black-bellied Sandgrouse showed a seasonal breeding pattern with a laying period extending 7 to12 weeks. The clutch frequency varied from 3 to 7 clutches per female per season. The mean clutch size was 2.66±0.47(1-3) eggs and the mean inter-clutch interval was 10 ± 2.7days. The average total egg production was 12 ± 5.83 eggs per female varying with age from 8 to18 eggs per female. Incubation duration is 28 days. Egg fertility and hatchability of fertile eggs increased with age and varied respectively from 50 to 85.1% and from 75 to 88.2%. Chick mortality occurred only in the first week after hatching averaging 60.5%. Chicks are precocial and fast growing becoming sexually dimorphic by 6 weeks of age and reach a mean asymptotic body weight (350 g) by approximately 10 weeks. Therefore, sandgrouse would provide a new promising source of low-cost animal protein through small-scale poultry in rural poor-resource arid areas.