TACKLING THE PROBLEM OF BLACKBUCKS IN BUSTARD SANCTUARY, KARERA

R.D. SHARMA*

Introduction

The Bustard Sanctuary, Karera established for the conservation of The Great Indian Bustard (*Ardeotis nigriceps*) now has large population of Blackbucks as its main beneficiary. 202.21 km^2 of sanctuary area between Mahuar and Sindh rivers is without any forest land. Out of 202.21 km^2 of land 55.55 km^2 is revenue land and rest is owned by Bhumiswamis. There are 32 revenue villages inside the sanctuary area presently having a total human and cattle population of 33,156 and 42,907 respectively. Various cereal crops such as gram, wheat and jwar, pulses and vegetables are cultivated in patches segregated by wastelands. In the year 1981, when sanctuary was declared the number of Blackbucks was only 100 to 150. The number of Blackbucks estimated from 1984 onwards in given in Table 1.

Table 1

Year	Number of Blackbucks
1984	187
1985	306
1986	456
1987	765
1988	1169
1989	1923
1990	2138
1991	2626
1992	3005
1993	3777

Over-abundant population of Blackbuck has posed a serious problem for farmers as well as for bustard management. Started in the year 1985, the problem of crop raiding by Blackbucks has become very acute. An extensive survey made to assess the extent of damage to crops investigates that lentil (*Lens enculenta*) with 17.67 per cent damage is most damaged crop which is followed by mustard (*Brassica campestris*), taramira (*Eruca sativa*) and gram (*Cicer arietinum*) with 13.15, 12.69 and 12.10 per cent damage respectively. The wheat (*Triticum vulgare*) is least damaged crop with only 10.97 per cent damage (Sharma, 1989). The Blackbuck damage problem resulting from increase in number of Blackbucks has given rise to many factors inimical to bustard conservation (Sharma, 1994). Therefore, translocation of Blackbucks has been felt necessary and translocation trials have been attempted from time to time. Some relief measures have also been tried.

Translocation Trials

As there is a need to each and translocation Blackbucks to some suitable area like Madhav National Park, Shivpuri, various translocation trials have been conducted on experimental basis which are given as here under.

(1) In the year 1987, efforts were made to catch Blackbucks, using nylon nets (10 cm

* Superintendent, Pench Sanctuary, Seoni (Madhya Pradesh)

x 10 cm) which were 240 cm in height. These nets were spread over the affected area. Blackbucks were driven towards the net but no success achieved.

(2) In the year 1988, traditional catchers Mogia tribals which used to catch wild animals alive in the past were employed to catch Blackbuck alive. They tried to catch Blackbuck by using noose and were successful in catching one doe but due to shock this could not survive.and died on the same day. As a result, this experiment was also considered as a failure.

(3) To catch Blackbucks, experts from Kanha National Park, M.P. and Wildlife Institute of India, Dehra Dun were approached to tackle the problem. After having proper idea of the problem Wildlife Institute of India, Dehra Dun, in collaboration with U.S. Fish and Wildlife Service tried to catch Blackbucks during the course of workshop on "Wildlife Damage Problem and Control" organized at Madhav National Park, Shivpuri and The Great Indian Bustard Sanctuary, Karera from 2-7 Feb. 1994. They tried to catch Blackbucks using rocket, corral, drop net and drive net, nut no success achieved.

Relief Measures

In view of the repeated failures of the translocation trials in order to provide relief to farmers, some following measures have been tried to mitigate the problem of Blackbucks.

(1) In the year 1988-89 crop protection chowkidars were kept by sanctuary management from amongst the affected farmers to protect the crops from Blackbuck depredations. Five such chowkidars were kept in each of the 12 affected villages. Each chowkidar was given the duty to protect his crop along with those of 4-5 neighbouring affected farmers.

This practice was continued in the year 1989-90 also, but now every affected farmer wanted to be appointed as chowkidar and every farmers wanted to be included in the list of affected farmers. The farmers started complaining that chowkidar protects his crop only. In such a situation this practice did not work and had to be stopped.

(2) In order to give relief to farmers from Blackbuck depredation on their crops, gram *(Cicer arietinum)* was raised departmentally over an area of 11.5 ha, 19.00 ha and 8.1 ha in the year 1990-91, 1991-92 and 1992-93 respectively in the most affected areas i.e. Turkari and Berkhera for use by black bucks. Blackbucks were allowed to use this gram freely without chasing them away. As farmers chase them away from their crops, they were observed to use departmentally raised *Cicer arietinum* freely. They were visiting these fields in large numbers, sometimes more than 500 Blackbucks aggregated in these fields. This practice was found to be successful in providing relief to farmers.

Future Strategy

Based on the past experience, following measures, which will be helpful in minimising crop raiding by Blackbucks and also be beneficial to bustard management, are suggested as here under:

(i) The translocation of Blackbucks to other suitable areas is not possible. All the available methods to catch Black-blacks for translocation of Blackbucks to some other suitable area have been tried but all have resulted in failures. To minimise crop

damage, the maximum possible number of Blackbucks is proposed to be brought inside 3 m high enclosures constructed using chain link fence and G.I. pipes. Inside these enclosures, crops like gram (*Cicer arietinum*) should be raised for use of Blackbucks and drinking water facility should be provided Gram cultivation inside enclosures is also necessary for luring Blackbucks to come inside enclosures. Mahua flowers do not attract the Blackbucks of Karera probably because Mahua does not naturally occur in the area and they have never tested it. Mahua flowers brought from other sources were kept to lure them but it gave negative results. Six such enclosures are proposed to be constructed one each at Behgawan, Turkani, Karawwa, Silra, Kharicha and Berkhera. Each enclosure should not be less than 50 ha in area. For construction of these six enclosures acquisition of 300 ha of land is essential.

(ii) The practice of departmental cultivation of *Cicer arietinum* for use by Blackbucks should be continued as it has been unequivocally proved to be a successful relief measure to farmers. In winters, when insect population in low, gram (*Cicer arietinum*) and taramira (*Eruca sativa*) constitute the only palatable diet during winters. Thus this practice is beneficial to bustard also.

(iii) *Zizyphus rotundifolia* which is most remarkable feature of the fauna is in great danger. Its leaves are favourite food of Blackbuck. Heavy grazing pressure and its exploitation by villagers for fodder purposes are destroying this species. Growing of *Zizyphus* by seed sowing will help in maintaining this species which will be available for use by Blackbuck and help in minimiseing crop raiding by Blackbuck. As drupes of *Zizyphus* are included in the diet of bustard, it will be beneficial to bustard also.

(iv) *Carrying out Eco-developmental works* : As a result of damage to crops by Blackbucks, farmers have become hostile to the concept of bustard conservation. In order to get their co-operation eco-development works should be taken up inside the sanctuary area. The various eco-development works suggested to be taken up are establishment of gobar gas plants, cattle breed improvement and stall feeding, lift irrigation and introducing crop insurance scheme with forest department contributing the part of premium as a good will gesture. The compensation of damage to the crop may be made to the owner after making survey of the damage by insurance company team. At present, no such scheme exists with any of the insurance company and such a scheme has to be newly introduced.

Discussion

Alarming increase in the number of Blackbucks in Bustard Sanctuary Karera has become a problem not only for farmers but also for bustard management. Tackling the problem of Blackbucks will be beneficial to the farmers as well as for bustard management. Translocation of Blackbucks to some other suitable area is impossible. All the available method to catch Blackbucks for their translocation have been tried but no success achieved. Its legal status imposes a severe restriction on an effective control strategy such as culling (Chouhan and Sawarkar, 1989). It is suggested that bringing Blackbucks inside enclosures, providing relief measures by growing *Cicer arietinum* for use by Blackbucks, growing of *Zizyphus*

rotundifolia for its maintenance and carrying out eco-development work will be helpful in mitigating the problem. The measures suggested to mitigate the problem of Blackbucks will also be beneficial in bustard conservation.

SUMMARY

Bustard Sanctuary, Karera has over-abundant population of Blackbuck as its main beneficiary. As per 1993 census, estimated population of Black-buck is 3,777. As cultivated fields are frequently invaded by Blackbuck, the problem of crop raiding by Blackbucks has become acute. Blackbucks are also creating problems for Bustard management. This paper presents translocation trails which have been conducted so for, relief measures provided to farmers and suggests measures to tackle the problem of Blackbucks in the present circumstances.

सारंग अभयारण्य, करेरा में कृष्णसार की समस्या सुलझाना

आर०डी० शर्मा

सारांश

सारंग अभयारण्य, करेरा में इससे मुख्या लाभ उठाने वालों के रूप में कृष्णसार की अत्यधिक संख्या मिलती है । 1993 की गणना के अनुसार कृष्णसार की अनुमानित संख्या 3777 है । ये कृष्णसार खेतों पर बार- बार धावा मारते हैं इसलिए कृष्णसार द्वारा समस्या फसल उजाड़ने की समस्या विकट बन चली है । कृष्णसार सारंग प्रबन्ध करने में भी समस्यायें खड़ी कर रहे हैं । प्रस्तुत अभिपत्र में अब तक किए गये स्थानान्तरण परीक्षणों, किसानों को राहत पहुंचाने के उपायों तथा वर्तमान परिस्थितियों में कृष्णसार समस्या सुलझाने के उपायों के सुझावों को दिया गया है ।

References

Chauhan, N.P.S. and V.B. Sawarkar (1989). Problems of over-abundant population of Nilgai and Black-buck in Haryana and Madhya Pradesh and their management. *Indian Forester*, **115** (7) : 488-493.

Sharma, R.D. (1989). *A survey* of crop damage by Blackbucks in Bustard Sanctuary, Karera.

..... (1990). *Management Plan* for The Great Indian Bustard Sanctuary, Karera for the period 1990-91 to 1994-95.

..... (1994). *Project Report* for Karera problem for the period 1994-95 to 1998-99.

..... (1994). Blackbuck damage - As a problem for Sanctuary management in Bustard Sanctuary, Karera. *Indian Forester*, **120** (10) : 924-928.