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SOME PROBLEMS CONCERNING THE CONTROL OF BIRD DAMAGE IN SOUTHWESTERN NIGERIA

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ABSTRACT: The problems of ~~controlling~~ bird damage, especially to crops, may be both social and practical. The practical problems are subject to environmental and ecological factors. The social problems relate to lack of adequate biological knowledge of the pest species, lack of confidence between farmers and researchers, persistent government red tapes, and human feelings. Damage is often as a result of feeding and nesting activities. Control measures include both prevention of contact between birds and crops by erection of barriers, use of chemical repellents and scaring devices, and attempted reduction in numbers of pest species, by shooting and trapping. None of the control methods is satisfactory. Local farmers have resorted to the use of 'juju' -- a mystified composition of no scientific qualification yet surrounded by lots of taboos and to which huge successes have been ascribed. It is pertinent in our stage of development to encourage and continue detailed biological research of the local fauna.

INTRODUCTION

There is an increasing awareness for the necessity of increased food production in Nigeria. The Federal Government of Nigeria has in fact embarked on an 'Operation Feed the Nation' program, whereby everybody is encouraged to cultivate whatever land is available in his or her environs. Inevitably, attention is bound to be focused on any animal liable to interfere with food production.

The crops commonly grown include cereals -- maize (Zea mays Linn), rice (Oryza sativa); guinea corn (Sorghum spp); cassava (Manihot utilisima Pohl), cowpeas (Vigna unguiculata), yams (Dioscorea sp.).

Birds constitute one of the most important pests of agricultural crops in Southwestern Nigeria. Cereal crops are more prone to damage by birds than other crops because of their small fruits, which are the preferred food of many birds. In fact damage by birds has been reported to be total on some rice plots (Funmilayo and Akande, 1977). There is therefore need for effective control measures.

Not much has been done on the biology of our local bird species. Bannermann (1930-51) discussed mainly distribution and taxonomy. Therefore, it is the paucity of knowledge of the ecology of pest species that hinders effective control strategies.

The present paper reviews the state of bird damage to agricultural crops in the study area, the attempts at controlling them, and the prospects for future improvement of control strategies.

DAMAGE

Damage to crops by birds in Southwestern Nigeria is effected either through feeding or nesting activities. The species involved include the crane (Crecoptis egregia), the red eyed turtle dove (Streptopelia semitorquata), the redbilled wood dove (Tururifer afer), and the laughing dove (Stigmatopelia senegaliensis). These pick small seeds like rice (Oryza sativa), pigeon peas (Cajanus cajan), and guinea corn (Sorghum spp.).

The bushfowl (Francolinus bicaicarus bicalcaratus) can feed on larger grains like maize (Zea mays) and cowpeas (Vigna sinensis var unguiculata). It also pecks and destroys yam tubers (Dioscorea sp.) and cassava roots (Manihot sp) causing qualitative losses since these are exposed to contamination by insects and fungi.

Five species of weaverbirds occur in the study area. Weaverbirds are the most important pests of rice in Southwestern Nigeria. The bronze mannikin (Lonchura cucullatus), the blue-billed mannikin (L. bicolor), and the redheaded quelea (Quelea erythrops) suck the milk of maturing rice grains. The village weaverbird (Ploceus cucullatus Nuller) and the chestnut and black weaverbird (Ploceus nigerrimus) are destructive both in their nesting and feeding activities. Nests are made of strips of leaves from oil-palm (Elaeis guineensis), coconut-palm (Cocos nucifera), plantain (Musa sapientum and N. cavendishii). These trees are heavily defoliated when hundreds of these birds remove leaves from them. Thus oil-palm plantations are threatened and in villages where they have many of these palms grown around houses, there occurs a lot of adverse effect on the rural economy.

Village weavers also cause destruction in maize plants. They shred open mature maize cobs and, although only few grains are pecked, the others are left open to contamination. Funmilayo (1976) reported a loss of 29.5% of maize-ear populations due to such attack. The qualitative loss may even be more serious, though not easy to assess.

The bronze mannikin, in addition also destroys ripe mature tomato fruits (Lycopersicon esculentum) by puncturing and sucking the juice. In areas where the species is abundant, the damage to tomatoes may be severe.

CONTROL

Damage Assessment

It is pertinent that cost of control must not exceed cost of damage. It is therefore desirable to assess fairly accurately the amount of damage incurred, which varies not only with the type of crop but the locality and size of farm.

Crop Protection

Netting has been advocated as a positive form of control creating a physical barrier between crop and pest. On large acreages, however, the erection of nets is impracticable because of the huge expense.

A local dye, 'Jelu' with varying colors, is currently being tried against bushfowl for color repellent attributes. Seeds are soaked in the dye and planted. Previous tests have indicated that the dye has no adverse effect on germination, and as yet on the food product.

Another local form of control which can be classified as repellent is the use of 'Juju' which in fact symbolizes 'magic'. This is a concoction of nonscientific qualification. It is randomly placed in the farms, and restrictions as to movement within the farms is dictated by lots of taboos, such as farms must not be visited by women. Nevertheless, farmers have claimed huge successes. It is necessary for scientists to investigate the chemical composition of these preparations.

The problems involved, however, are social. The local herbalists who supply these preparations are not likely to release them to scientists because of the fear of undermining their authority and possibility of losing their hard earned jobs.

Control of damage could be either by protecting the crop from being attacked or controlling the bird pest itself.

Bird Control

The most common method of control used in the area of study is scaring (human scarers). Women and youths are either employed, or members of the farming family take it in turns to scare birds from their farms at the critical periods. However, with recent trends of development in the country, it is now increasingly difficult to get human scarers. All youths are now being compelled to go to school with the introduction of the universal free primary education scheme. Also, within the last few years, the cost of labor has risen by over 400%, so that to employ hands for scaring has become very expensive.

Other forms of control include shooting. This is also a form of sport because it is used mainly against species like the bushfowl which is highly edible. Shooting as a control measure is uncommon and used only in a few government and institutional farms.

Bird trapping is not very common, though attempts are just being made to improve both local and imported traps, to suit the habits and size of our local species.

Alphachloralose, a stupefying bait used at 5% concentration, has been successful in catching bushfowl on planted field and thus reducing damage. Maize grains coated with the bait are broadcast in the affected areas. Bushfowl consume the treated grains and get stupefied. Usually constant watch is kept on the farm so as to pick up affected birds.

The danger of the use of lethal chemicals, particularly those whose side effects on humans are yet unknown, is the fear that birds caught may be eaten by man. In this area, bushfowl and some other local birds are regarded as a delicacy.

CONCLUSION

The problems of controlling bird damage in Southwestern Nigeria are far from being resolved. In fact there is no widely acceptable suitable control measure now. A developing country, like Nigeria, is beset with a lot of political problems which also affect our technological development.

It is imperative that encouragement should be given to the study of the biology and ecology of our avian pest species. Thus it will be possible to look into the current methods of control that are being used in developed countries, and adapt suitable ones for our local use.

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