

Research Application Summary

Village chickens: options to improve nutrition and health of HIV and AIDs affected individuals in Maracuene district, Mozambique

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Abstract

The prevalence of HIV is high in Mozambique. In young women, aged 15 to 24, the estimated HIV prevalence rate is 10.7%, compared to a prevalence rate of 3.6% among young men in the same age group. Nearly half of the people with HIV living in poor urban areas have a high prevalence of food insecurity. Village chickens can provide a scarce resource - animal protein - in the form of meat and eggs, and can be sold or bartered to meet essential family needs such as medicine, clothes and school fees. Two hundred and forty vulnerable households comprising women, orphans and vulnerable children and HIV - affected individuals were selected, trained in low-cost improvements of village chicken, and each received a chicken starter pack (three hens and one rooster) to improve their protein intake and improve nutrition. In a period of nine months, 98 hens had hatched 1210 chicks. With the increased availability of chickens, farmers started setting more, but the consumption was still low. The number of chickens consumed per family over a three months period, increased from 1.02 to 1.51 and the average number of chickens sold per family in three months period, increased from 0.38 to 2.53 chickens. Thirty-six (21 male and 15 female) community vaccinators were trained and vaccinated 18,056 chickens in 1,957 households of the district, including in households of people affected by HIV and AIDS. The average flock size in the households that were vaccinated regularly increased from 8.5 to 10.54 after two vaccination campaigns. No reports of mortality of chickens with clinical signs of Newcastle disease were reported in the areas where vaccination took place. The farmers that performed better were selected to host the breeding and nutrition experimental studies in Mozambique under the Marker-assisted breeding of selected native chickens in Mozambique and Uganda.

Keywords; HIV - AIDs, market-assisted breeding, Mozambique. newcastle disease, nutrition, Village chicken;

Résumé

La prévalence du VIH est élevée au Mozambique. Chez les jeunes femmes âgées de 15 à 24 ans, le taux de prévalence du VIH est estimé à 10,7 %, contre un taux de prévalence de 3,6 % chez les jeunes hommes du même groupe d'âge. Près de la moitié des personnes vivant avec le VIH habitant dans des zones urbaines pauvres ont une prévalence élevée d'insécurité alimentaire. Les poulets indigènes peuvent fournir une ressource rare des protéines animales sous forme de viande et d'œufs, et peuvent être vendus ou échangés pour répondre aux besoins essentiels de la famille tels que les médicaments, les vêtements et les frais de scolarité. Deux cent quarante ménages vulnérables comprenant des femmes, des orphelins et des enfants vulnérables et des personnes atteintes du VIH ont été sélectionnés, formés à l'amélioration à faible coût du poulet indigène et ont reçu chacun

un kit de démarrage de poulet (trois poules et un coq) pour améliorer leur apport en protéines et alimentation. En neuf mois, 98 poules ont fait éclore 1210 poussins. Avec la disponibilité accrue des poussins, les agriculteurs ont commencé à en implanter davantage, mais la consommation était encore faible. Le nombre de poulets consommés par famille sur une période de trois mois est passé de 1,02 à 1,51 et le nombre moyen de poulets vendus par famille sur une période de trois mois est passé de 0,38 à 2,53 poulets. Trente-six (21 hommes et 15 femmes) vaccinateurs communautaires ont été formés et ont vacciné 18 056 poulets dans 1 957 ménages du district, y compris dans les ménages de personnes atteintes de VIH et du SIDA. La taille moyenne des troupeaux dans les ménages régulièrement vaccinés est passée de 8,5 à 10,54 après deux campagnes de vaccination. Aucun rapport de mortalité de poulets présentant des signes cliniques de la maladie de Newcastle n'a été enregistré dans les zones où la vaccination a eu lieu. Les agriculteurs qui avaient obtenu les meilleurs résultats étaient sélectionnés pour accueillir les études expérimentales sur l'élevage et la nutrition au Mozambique dans le cadre de la sélection assistée par marqueurs moléculaires de poulets indigènes sélectionnés à Mozambique et en Ouganda.

Mots clés; VIH - Sida, sélection assistée par marqueurs, Mozambique, maladie de Newcastle, nutrition, poulet indigène

Introduction

HIV prevalence is particularly high in Mozambique. In 2015, an estimated 1.5 million people were living with HIV in the country and HIV prevalence was estimated at 10.5%, the eighth highest in the world. The prevalence is higher in the southern part of the country. In young women, aged 15 to 24, the estimated HIV prevalence rate is 10.7%, compared to a prevalence rate of 3.6% among young men in the same age group. The HIV and AIDS pandemic, combined with drought, floods, soaring food prices and the political conflict, have overwhelmed families. In general the vulnerable families affected by HIV and AIDS are chronically unable to meet basic household food needs adequately because adults become ill or die or have to provide increasing care for ill relatives or orphans.

Nearly half of the people with HIV living in poor urban areas have a high prevalence of food insecurity. For this reason, it is important to ensure that people who test positive for HIV have immediate access to HIV services, including good nutrition. Village chickens can provide a scarce resource - animal protein - in the form of meat and eggs, and can be sold or bartered to meet essential family needs such as medicine, clothes and school fees (Alders *et al.*, 2007). In addition, most rural households depend primarily on crop income, and as such, chickens can increase their resilience by reducing their vulnerability to rainfall and other shocks (Bah and Gajigo, 2019). The output of village chickens is lower than that of intensively raised birds, but it is obtained with minimum input in terms of housing, disease control, management and supplementary feeding. The chickens are generally owned and managed by women and children (Thieine *et al.*, 2014) and are often essential elements of female-headed households (Bagnol *et al.*, 2015). As women are the main carers of sick people, chickens can play an important role as they provide the women with additional resources to carry out their important task of supporting people living with AIDS. In addition for rural households dependent primarily on crop income, the poultry sector can increase their resilience by reducing their vulnerability to rainfall and other shocks

In order to help the most vulnerable women and children in the district to reduce malnutrition in their families in a sustainable and locally appropriate way, a nine months project, July 2017- March 2018, was implemented in six villages of Marracuene district in Mozambique. The main aim was to improve nutrition and income through better production of local chicken ecotypes, i.e., village chicken.

Methodology

Two hundred and forty vulnerable households comprising women, orphans and vulnerable children and HIV - affected individuals were selected by the district Health, Women and Social Welfare Services. After receiving training in low-cost improvements to village chicken, each beneficiary's home received a chicken starter pack (three hens and one rooster) to improve their protein intake and improve nutrition. As the chickens were sourced from different households from the district they had different ages and were not all vaccinated against Newcastle disease (ND). Before distribution the chickens were put in quarantine and vaccinated against ND. Subsequently, the beneficiaries were the birds on low-cost improvements to village poultry. Aspects covered included: building chicken houses, use of locally available feed to feed the chickens, disease control with particular emphasis on ND control, and monitoring and evaluation of vaccination campaigns.

After distribution of the chickens, weekly monitoring visits were made to the beneficiary households. In addition, 36 community vaccinators from six villages were selected in collaboration with the District Services of Economic Activities, village leaders and local communities and trained in ND control and implementation of ND vaccination campaigns.

Results

By the end of the project, out of the 720 hens distributed, 98 hens had hatched 12 10 chicks. With the increased availability of chickens, farmers started selling more, but the consumption was still low. The number of chickens consumed per family over a three months period increased from 1.02 to 1.51 and the average number of chickens sold per family in three months period increased from 0.38 to 2.53 chickens in July 20 17 and March 20 18, respectively.

The project was able to train 36 (21 male and 15 female) community vaccinators for vaccination against ND, 12 (5 women and 7 men) extension and livestock workers from the District Services of Economic Activities (SDAE), who managed to vaccinate 100% (n - 18, 056) of the planned number of chickens in the district. The vaccination campaigns involved 1,957 households (98.3 % of the planned), including people affected by HIV and AIDS. The average flock size in the households that vaccinated regularly increased from 8.5 to 10.54 after three vaccination campaigns. No reports of mortality of chickens with clinical signs of ND were received in the areas where vaccination took place.

Conclusion

This project was designed to be sustainable with participatory approaches and strengthening the exchange of information and ideas between government entities responsible for policy guidance for women and child development and communities. At the end of the project, district services were enthusiastic and encouraged to continue the activity. The district government officials became very enthusiastic with the project achievements and have committed to support the continuation of the activities in the district. The beneficiary households have seen that regular ND vaccination protects their chickens against ND and reduce chicken mortality. However, more sensitization and regular monitoring is still required in terms of nutrition.

The farmers that performed better were selected to host the breeding and nutrition experimental studies under the Marker-assisted breeding of selected native chickens in Mozambique and Uganda.

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