Republic of Zambia

MINISTRY OF FISHERIES AND LIVESTOCK

Enhanced Smallholder Livestock Investment Programme (E-SLIP)

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Author: Natasha Mhango – Knowledge Management and Communications Specialist

EXECUTIVE SUMMARY

A case study was conducted to document the success of interventions through the Disease Control Unit (DCU) of the Enhanced Smallholder Livestock Investment Program (E-SLIP), in bringing East Coast fever (ECF) under control. The case study was conducted in Eastern province, particularly Chipata and Katete districts, in which East Coast Fever is endemic.

This case study was undertaken to document evidence that disease control interventions by the Enhanced Smallholder livestock Investment Programme (E-SLIP) to control East Coast fever produced the desired results of reducing ECF prevalence to levels that are low enough to enable smallholder rural communities grow their herds of cattle.

The study highlighted the activities that were undertaken by E-SLIP that can be attributed to the success of ECF control Interventions and challenges that were faced and overcome.

Overall, E-SLIP interventions in the control of East Coast fever produced the positive outcome that were aimed for. The interventions have facilitated the immunization of 123, 555 cattle from 2018 to date. Furthermore, these interventions which were initially being conducted in Eastern and Southern provinces only, have been rolled out to other provinces namely: Central, Lusaka, and Copperbelt.

An equally significant achievement has been that, through E-SLIP, Zambia's is now able to produce its own ECF stabilates, namely *Katete* and *Chitongo*. However, during

2019/2020, there were some challenges in the production of the *Chitongo* stabilate due to some challenges in the procurement process. Furthermore a stabilate specifically for the ECF strains that are dominant in Northern and Muchinga provinces has also been developed and is awaiting field evaluation.

INTRODUCTION

Sustainable livestock productivity among smallholder rural farmers is being enhanced through control of animal disease such as East Coast fever (ECF). The Enhanced Smallholder Livestock Investment Programme (E-SLIP) has been working to control animal disease challenges by strengthening government's capacity to reduce animal diseases such as of East Coast fever in rural communities.

Through the Disease Control Unit, E-SLIP conducted the Infect and Treat Method (ITM) of East Coast Fever immunization in Eastern, Southern, Lusaka, Central and Copperbelt provinces.

BACKGROUND: A BRIEF HISTORY OF EAST COAST FEVER IN ZAMBIA

The first case of East Coast Fever was reported in Zambia in 1922 in an area called Fife in Nakonde district from which it began to spread to other northern districts namely Isoka, Chinsali and Mbala. Seven years later, a case was reported in Lundazi and by 1945, ECF was reported in Chipata district and that set the start of the spread of the disease to other districts of Eastern Province namely Chadiza, Katete, Sinda, Petauke and Nyimba.

Between 1977 and 1978, the disease was reported at Hufwa in Monze district of Southern province where it reduced the population of cattle from 1.5 million in 1977 to 600,000 about 5 years later. Come the mid-1980s, East Coast fever cases where recorded in Lusaka and later in Central and Copperbelt provinces.

Control measures for East Coast fever involve different interventions which include:

I. stock movement restrictions
II. dipping and spraying
III. the use of local cattle breeds which are more disease resistant and
IV. Immunization which is the intervention that the disease control unit under E-SLIP chose to implement.

When E-SLIP began its East Coast fever immunisations, the government had been immunizing in only two (2) provinces (Eastern and Southern). To date, the project has extended ECF ITM to Lusaka, Central and Copperbelt provinces.

MAIN OBJECTIVE

The main objective of the case study was to document the success of the ECF control interventions

SPECIFIC OBJECTIVES

a) To highlight the activities that were undertaken as part of the ECF control interventions
b) To document farmers' experiences and opinions of the ECF control interventions
c) To highlight the successes and failures of the ECF control interventions; and the activities that led to them

STUDY AREA

The case study was conducted in Chipata and Katete districts of Eastern Province.

APPROACH TO EAST COAST FEVER IMPLEMENTATION IN COMMUNITES

The interventions are a continuation of ECF control measures that were being implemented by the Smallholder Livestock Investment Program (SLIP) and Livestock Development and Animal Health Programme (LDAHP). The approach began with community sensitizations through field staff and media campaigns by which farmers were educated about ECF, the significance of the immunization exercise and how the exercise would be rolled out.

The Disease Control Unit executed the Infection and Treatment Method (ITM) procedure for farmers who voluntarily surrendered their cattle for the immunization exercise after paying farmer contribution.

As part of its objective to achieve full cost recovery of the ECF-ITM exercise, farmers were expected to pay subsidized monetary contributions which have been increasing gradually as the life of the immunization exercises progressed.

Field staff were then equipped with the needed resources to go into the communities and vaccinate the calves.

RESULTS

Some issues that arose from the study included:

1. Through E-SLIP's disease control interventions, 123,555 cattle have been immunized against ECF from 2018 to date in all participating provinces
2. ECF interventions have been expanded from two provinces namely Eastern and Southern, respectively, in Zambia to other provinces namely: Lusaka, Copperbelt, and Central.
3. Zambia is currently producing its own ECF stabilates namely Katete and Chitongo with the support of E-SLIP
4. A stabilate for Northern and Muchinga provinces has been developed and awaits field evaluation
5. E-SLIP has facilitated the development of a disease control database through which evidence of the reduction in ECF as well as other livestock diseases are recorded and monitored

CHALLENGES

The Disease Control Unit reported that some of the challenges which have been faced in the control of East Coast Fever were:

i) Occasional shortage of nitrogen liquid – a key ingredient in the storage of the vaccine which resulted in delays in carrying out immunizations timely.
ii) challenges in the production/acquisition of the *Chitongo* stabilate particularly in 2019/2020 due to challenges in the procurement process
iii) Some farmers still believe that traditional practices such as burning the swellings on the cattle are more effective than immunization.

EMERGENT ISSUES

a) There has been evidence of a change in mind-set towards animal health. Most participants in the study attested to having appreciated the immunization interventions and are willing to bear the future cost of regular immunization, should E-SLIP phase out
b) Participants had either lost herds of cattle to East Coast fever or knew of other farmers who had lost cattle to the disease and this was a leading motivation for them to participate in disease control interventions.
c) Farmers are willing to participate in ECF immunization twice in a year as was initially conducted, rather than the current annual exercise

PARTICIPANT TESIMONIES

Grace Lungu – cattle farmer from Chinjala Resettlment Scheme in Chipata
Grace Lungu is a member of Chinjala Dairy Cooperative Ltd. In 1999, she had 4 cattle; today she says she has 28. She testified that during the growth of her herd, she lost a few calves to ECF. "I heard about ECF when I first started keeping cattle because I wanted to make sure that my animals are healthy," Grace said. She said that through sensitization of her area extension officers, she heard about ECF immunizations that were being conducted by E-SLIP. Grace is a member of a dairy cooperative that received dairy cattle through an African Development Bank initiative. She said she received 2 dairy cows which unfortunately died due to a disease she is still not sure about. This is one experience that strengthened her resolve to consistently immunize her cattle against diseases which include ECF. Furthermore, through her cooperative, Grace participated in a training in dairy cattle management which she said has broadened her vision to go into dairy production. "I know that dairy, money is easy and faster to get money than beef [production]," Grace said and she understands that this is possible through attention to animal health care Grace is also well informed in forage production and currently grows some for her cattle.

"I currently have 2 dairy cows and even after E-SLIP goes, I'll still be taking my calfs for immujnization – I'm very much willing to be paying for this service," Grace said.

Tipembenji Phiri – cattle farmer from Katete district

Influenced by the tradition of cattle rearing in Eastern province, 72 year old Tipembenji, it was normal for her to use the proceeds of her cotton production and purchase cattle as a young lady in the 1980s.

"I bought 8 calves but unfortunately 5 died due to East Coast Fever," she disclosed.

This lost was so grave to her, that when she heard from her son that E-SLIP was conducting ECF immunization, she knew it was an investment she worth making.

"I use my cattle for ploughing and once in a while I slaughter one to eat; and also sell some of that meat," Tipembenji said.

Tipembenji(L) poses for a picture with her son

Charles Zulu – cattle keeper from Chipata District

"The first calf I had died at the age of 6 months as a result of east coast fever. That was in 1987," Charles Zulu recalls.

He said that there have been previous interventions to control ECF and those involved spray races but in 1989, he took the only calf he had at the time, for immunization when the ITM procedure first introduced in his area. Today he boasts of having 18 cattle.

"I wish that E-SLP could be doing the immunization exercises twice a year like they used to before. Recently, they only being doing it once a year," Charles lamented.

Charles Zulu said he wishes to try his hand at dairy farming

Malotela Mbewe – cattle farmer from Chipata district

Malotela Mbewe began rearing cattle after he retired form formal employment. He said he started off with 8 cattle about 10 years ago and today, he has 34. He said he entered farming with very little knowledge and experience and as a result, he saw a high mortality of his calves to ECF.

"Cattle at that time when you retire was just a [sign] of pride little did I know that t was good agriculture to venture into," Malotela said.

He said he heardabout E-SLIP interventions thoug community sensitization

As his cattle population is growing due to good health practices, he has started executing plans to execute his kraal

"Eastern Province as it is growing very fast…beef has become expensive, milk has become expensive so if I had 100 cattle tomorrow, it would mean more money in my pocket," he chuckled.

He disclosed that currently, he sells about 5 to 6 cattle annually for household consumption as well as income generation.

Malotela said he purchased cattle as an identity of pride but has gradually realized that the larger value of his animals

WHAT MADE E-SLIP INTERVENTIONS STAND OUT FROM OTHER EAST COAST FEVER CONTROL INTERVENTIONS?

On the one hand, E-SLIP has been building on the lessons learned from its previous interventions as Smallholder Livestock Production (SLIP)

A second but equally significant reason for E-SLIP success in the East Coast Fever control can also be attributed to the fact that E-SLIP is an integrated programme through which all key attributes for livestock production such as animal nutrition and disease control have been synergized into the communities that are also beneficiaries of the stocking and restocking exercise.

LESSONS LEARNED AND RECOMMENDATIONS

One major lesson that E-SLIP can draw from is that some willing cattle farmers were occasionally omitted from the ECF immunizations. This is because in order to enable the purchase of some items necessary for the vaccines, farmers were requested to make upfront payments and furthermore, there was no provision for payments to make on-the-spot payments once the immunizations begun.

This entailed that the cattle of such farmers were omitted from the exercise.

It is therefore recommended that an initiative which allows a certain number of cattle to be paid for on-the-spot to begin with, to eventually increase the number of cattle being immunized.

CONCLUSION

The ECF controls by E-SLIP have instilled a change in mind-set change in most cattle farmers. From the interviews, farmers have been committed to the immunization exercise regardless of the monetary contributions they are obliged to pay and on which gradually increments have been added over the years,

Furthermore, as a result of other interventions such as the stocking and restocking exercise, farmers have been made aware of the need to make farming a business and hence are appreciating disease control interventions as necessary investments into that can improved the quality of their livestock and in the long run better market prices.

Interviews with district and provincial staff indicated that the incidences of ECF are significantly low in Eastern province and as such, it can be concluded that E-SLIP interventions have contributed significantly to the successful control of ECF.