

Country Report: Swaziland

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SWAZILAND is a land-locked country lying between 30°45' and 32°10' east longitude and between 25°40' and 20' south latitude. It is bordered by Mozambique and South Africa. Of a total human population of 929 718 (1997), 715 290 live in rural areas. In 1996, there were estimated to be 1 017 738 poultry in Swaziland.

Newcastle Disease

Newcastle disease (ND) in Swaziland is now considered endemic, given the recent outbreaks. In 1994, there was a countrywide outbreak followed by sporadic occurrences up to 1998, when the country experienced another serious outbreak that was widespread. As a result of the 1998 outbreak, the Department of Veterinary and Livestock Services decided to evaluate and review the 1994 program.

The 1994 outbreak mainly involved free-range backyard poultry. A few commercial flocks which did not follow the standard control measures for the disease were also affected. The cause of the outbreak was the velogenic strain of ND virus.

Newcastle disease in Swaziland is a notifiable disease and as such the responsibility of its control falls under the Department of Veterinary and Livestock Services.

Control program during the 1994 outbreak

There was a countrywide vaccination program mainly aimed at indigenous free-range backyard chickens. Farmers with commercial flocks were encouraged to continue with existing control programs.

The Department of Veterinary and Livestock Services was responsible for coordinating all the activities related to the vaccination program.

There were no enforced movement control measures. People were discouraged from moving their birds, and at times buses and cars were checked by the veterinary personnel.

Despite the best efforts of the Department to cope with the ND outbreak, there were a number of constraints:

- shortage of staff and transport to convey government personnel;
- homesteads inaccessible to government personnel;
- some farmers resisted the whole exercise;
- chickens incubating the disease were vaccinated and continued dying;
- late reporting of ND outbreaks allowing the disease spread rapidly;
- limited State funding;
- no properly designed movement control measures;
- no time to give booster vaccination;
- limited time for extension work; and
- farmers had limited information about the disease.

Review of the outbreak

There was limited success in controlling the disease, evidenced by the fact that chickens throughout the whole country ended up being infected.

The following factors were identified as having contributed to the limited success of the control strategy:

- trade in live chickens occurred everywhere, i.e. next to the roads, between families and neighbours;
- sick chickens and those carrying the disease were mainly sold and that encouraged the fast spread of the disease;
- direct contact with infected chickens;
- chickens are among the cheapest gifts;
- general movement control of chickens was difficult, given their small size;
- veterinary personnel also contributed to the spread of the disease during the vaccination campaign;
- farmers had limited information about the disease with some suspecting that the veterinary personnel were responsible for killing their chickens;
- there was late reporting of the disease;
- limited resources; and
- shortage of personnel.

Given the above factors, the response from farmers varied. Some farmers resisted the whole

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exercise in the belief that the government's intention was to wipe out the remaining chickens, especially those adjacent to areas where birds started dying soon after vaccination. Others appreciated the exercise and were willing to work and cooperate with the government personnel.

Current control program

The current program is based on the above findings, and concentrates on farmer's education and proper management of ND.

Education

Information is spread through the electronic media, national newspapers, pamphlets, and agriculture newsletters. As well, there are workshops and seminars conducted by Veterinarians and Poultry Extension workers. Animal health courses are being taught in schools, colleges and universities.

Management

Properly designed movement control measures have been put in place, such as mounting road blocks and discouraging uncontrolled chicken trade during outbreaks of the disease. Chickens should never be moved from a suspected ND area to another. People are encouraged to report any sick and dead chickens to the Veterinary Department as soon as possible, and not to hide information about the flock. Farmers must demand vaccination history before purchasing any chickens, and not introduce any new chicken to their flock, unless proper history of the chick is known.

Farmers are also being educated about vaccine handling, management and application.

Vaccination program

Two vaccination strategies were formulated for backyard poultry. A short-term program was used consisting of a combination of live vaccination and

oil-based vaccine. The advantage of this combination being that:

- the live vaccine has a rapid immune stimulation effect but lasts for a short period; and
- the oil-based vaccine has a slow immune stimulation effect but the immunity lasts longer.

The long-term program is to routinely vaccinate following the short-term program, using mainly oil-based vaccines. Also a Commercial Layer program can be used for backyard poultry.

Evaluation of the current program

The program is gradually and positively achieving its set objectives, although with some minor limitations.

The advantages of the current program are that:

- it is farmer-driven, unlike the previous program which the farmers believed was imposed;
- the disease is now within bearable limits as only sporadic outbreaks are experienced;
- the limited department personnel are now mainly used for extension purposes;
- farmers are now buying the vaccine;
- farmers are continuously educated about the proper management and control of the disease;
- there is less risk of the disease spreading by the veterinary personnel; and
- there is less government spending.

Limitations

- there is less government control of the vaccination process as a result of inadequate data related to the disease and vaccination coverage;
- cold chain problem; and
- handling, management and application of the vaccine by the farmers need close monitoring and continuous education.

Given the nature of the disease a long-term regional approach in the control of ND has to be considered.