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Oral vaccination of chickens against Newcastle disease with I-2 vaccine coated on oiled rice

Abstract

Antibody response produced by *Newcastle disease virus* (NDV, strain I-2) when given orally through oiled rice to chickens was determined. Serum samples were collected before and at a weekly interval for 28 days after vaccination and tested for haemagglutination inhibition (HI) antibody to NDV. The results showed 7 days after vaccination HI antibody titre $\log_2$ was 3.8. Moreover, 14 and 28 days after vaccination HI antibody titre $\log_2$ reached 6.5 and 8.0, respectively. All unvaccinated chickens were negative to NDV antibody throughout the study. Significant finding from the present study is that 7 days after vaccination chickens had produced protective antibody against NDV; this is in contrast to previous studies. Therefore, I-2 vaccine coated on the oiled rice is efficacious as it protects chickens from challenge with NDV.

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ORIGINAL PAPER

Oral vaccination of chickens against Newcastle disease with I-2 vaccine coated on oiled rice

P. N. Wambura

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Abbreviations

EID_{50}	median embryo infectious dose
HA	haemagglutination

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Keywords Chickens · Newcastle disease · Oiled rice · Oral vaccine · Strain I-2

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HI	haemagglutination-inhibition
NDV	*Newcastle disease virus*

Introduction

Newcastle Disease (ND) is worldwide regarded as one of the most economical important disease of poultry and other birds, because of the devastating consequences of *Newcastle disease virus* (NDV) infections on infected birds, with flock mortality reaching up to 100% as well as the economic impact of trading restrictions and embargoes placed on areas and countries where outbreaks have occurred (Alders and Spradbrow 2001).

Vaccination has been the only effective way of controlling ND. Food-based vaccines have been developed to be used mainly to protect village chickens against ND (Spradbrow 1992). This has been prompted by the difficulty of catching scattered feral village chickens for conventional vaccination. Food-based vaccines are also preferred for use in poultry because they avoid stress associated with handling of birds for individual vaccination, spray vaccination or water deprivation before drinking water vaccination.

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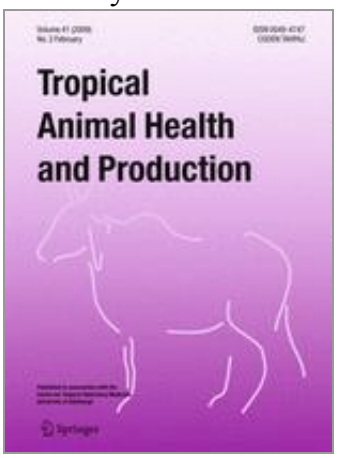

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