

# SAFE AND EFFECTIVE ATTENUATED COCCIDIOSIS VACCINE

## EIMERIAVAX 4m

### MANAGING COCCIDIOSIS IN POULTRY WITH EIMERIAVAX 4M

The intestinal disease, coccidiosis, caused by seven species of *Eimeria* (a group of coccidian parasites) is routinely controlled with medication or vaccination. Vaccination has advantages over medication where medication is not desired or permitted and provides life-long protection against coccidiosis from a single dose. Ideally, the vaccine should contain low pathogenic, attenuated and precocious strains of the *Eimeria* species of concern in the target poultry production system to promote immunity early in life without causing clinical coccidiosis.

EIMERIAVAX 4m is a live coccidiosis vaccine containing precocious and attenuated strains of the four most significant *Eimeria* species in commercial poultry operations worldwide. The strains\* of *Eimeria acervulina*, *E. maxima*, *E. necatrix* and *E. tenella* included in EIMERIAVAX 4m were selected from antigenic and low pathogenic field strains and attenuated for precociousness.





Clinical and field trials have proven the safety and efficacy of EIMEIRAVAX 4m in commercial poultry production systems.

The *Eimeria* strains selected for EIMERIAVAX 4m allows adequate immunity development to the four species in as little as 10 days with complete immunity achieved by 21 days post vaccination. All strains used in EIMERIAVAX 4m are highly sensitive to anticoccidial medications, and can therefore be used to assist in resensitisation of field coccidia over time where reduced anticoccidial sensitivity is suspected.

*Eimeria acervulina* Strain RA<sub>3+20</sub>, *E. maxima* Strain MCK<sub>+10</sub>,  
*E. necatrix* Strain mednec<sub>3+8</sub> and *E. tenella* Strain Rt<sub>3+15</sub>

## BENEFITS OF EIMERIAVAX 4M - LIVE COCCIDIOSIS VACCINE

- Simple, single dose eye-drop or oral application in hatchery or in the poultry house
- Safe in chickens at day-old
- Immunity induced within 10 days against the four major poultry species of *Eimeria* (*E. acervulina*, *E. maxima*, *E. necatrix*, and *E. tenella*)
- Effective in broiler and layer breeders, free range layer, barn layer and broiler flocks
- Simple refrigerated storage requirements
- No anticoccidial medications are required

## HOW IMMUNITY TO EIMERIAVAX 4M VACCINATION DEVELOPS

The vaccine primes the immune system at the time of vaccination and is followed in subsequent days by an immune response as the *Eimeria* lifecycle begins in the gut. Although some immunity may be achieved early in life, some *Eimeria* will continue to "cycle" through the gut of the chicken as full immunity is achieved and throughout the life of the flock. Immunity to *Eimeria* coccidia occurs with repeated exposure which only occurs



when birds are in contact with their litter. In the days after vaccination, *Eimeria* oocysts are excreted and following a further maturation step in the litter over the next day or so (sporulation), are incidentally reingested. This so called “cycling” ensures the parasite continues to stimulate the immune system and maintain immunity.

### MAINTAINING CONDITIONS THAT FAVOUR VACCINE EFFICACY

To ensure the viability of excreted oocysts and sporulation to allow cycling and continued immunity throughout the poultry production period, the litter should be maintained below 41 °C and prevented from becoming very dry. Continued exposure to the *Eimeria* coccidia in EIMERIAVAX 4m is essential to maintain life-long immunity, and care should be taken to ensure this occurs when moving stock. If necessary, a further vaccination after stock movement occurs has been shown to maintain immunity.

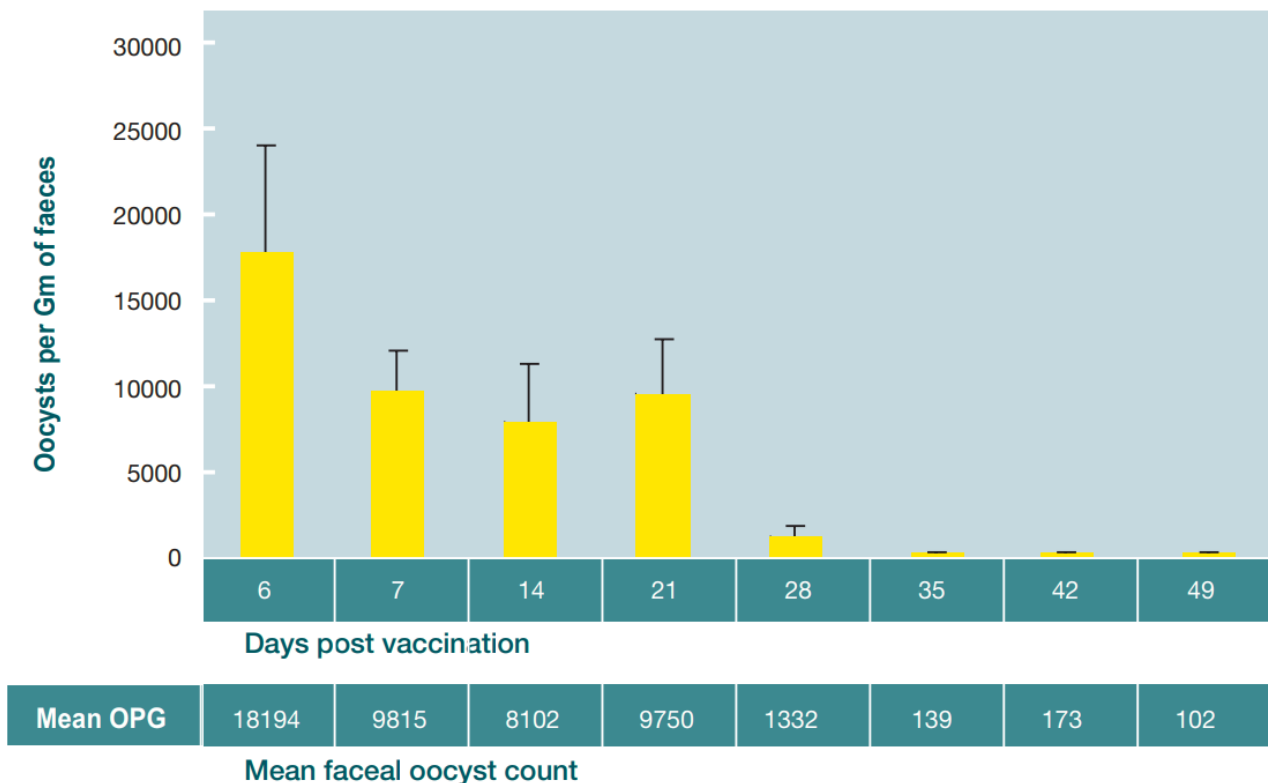
**Figure 1** demonstrates the drop in faecal oocyst output from broilers over 49 days following vaccination and immunity development. Faecal oocyst counts reached their maximum levels around 6 days post vaccination. After this time, faecal oocyst counts decreased quickly to very low levels at day 28, and were almost undetectable by 35 days post-vaccination.

A full description of the storage, handling and method of administration of EIMERIAVAX 4m is described in the product leaflet that accompanies the vaccine and from AgriHealth NZ Ltd.

### VACCINE STORAGE

EIMERIAVAX must be stored between 2 °C and 8 °C. DO NOT FREEZE. Provided that the product is within its prescribed shelf life, always use the oldest vaccine first. EIMERIAVAX 4m is formulated to ensure sufficient oocysts are present over the shelf life of the product.

**Figure 1. Development of immunity following vaccination with EIMERIAVAX 4m:**



## VACCINE PROGRAM

### USE ALL PRODUCT WITHIN 6 HOURS OF OPENING

Chickens from day-old can be vaccinated with EIMERIAVAX 4m. The vaccine may be administered by eye-dropper or by spray or gel. With individual bird administration, it is critical each bird receives a correct dose. It is recommended all chickens be vaccinated prior to 18 weeks of age. The most appropriate age to vaccinate may be determined from knowledge of the challenge conditions applicable to the flocks concerned. The effect of EIMERIAVAX 4m vaccination during lay has not been assessed.

### VACCINE PRESENTATION

EIMERIAVAX 4m is supplied in a plastic peel-top 25 mL bottle with a rubber stopper and aluminium seal. Each bottle is supplied with an eye-dropper teat and contains 1000 doses.

## MAINTAINING VACCINE SUSPENSION

As oocysts are heavier than the suspension solution, the vial containing the vaccine should be gently shaken prior to eye drop administration or mixing into a spray or gel preparation. DO NOT shake the suspension vigorously as this may rupture the oocysts. It is also important to keep the vaccine bottle gently agitated during administration. If, during vaccination by eye, an operator is unsure that a dose was administered into the eye, a repeat dose should be given. EIMERIAVAX 4m is tested for safety to a 10 times dose.

## VACCINE ADMINISTRATION

Please contact **AgriHealth NZ Ltd** for detailed eye-dropper, spray, gel or water administration and if further information regarding specific spray units is required.



EIMERIAVAX 4m is manufactured by Bioproperties Pty Ltd., Australia and is distributed in New Zealand by AgriHealth NZ Ltd. for Huvepharma, Europe.

**EIMERIAVAX 4m is registered pursuant to the ACVM Act 1997, No. A11638**

See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

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