EHD V2 & V6 EXPERIMENTAL VACCINE

Medgene has been generating data for the EHD vaccine since 2016. Initially, experimental EHD V2 vaccine was generated during the period covering late 2015 through early 2016, and was available for evaluation in July of 2016. In 2020, Medgene Labs received USDA approval to provide experimental EHD V2 & V6 vaccine. Users of the vaccine were asked to collect data in regards to safety and clinical impression of the vaccine. Results were submitted to the USDA in December. In January 2021, the USDA approved continued use of the experimental EHD V2 & V6 vaccine through 2021.

For more information or to place an order, please contact Ashley at ashley@medgenelabs.com or 605-692-1268.

Results from Experimental EHD Vaccine Use

Previously to 2016, data was obtained in white-tailed deer 6 months of age or older and shared with the industry at conferences and through magazine articles. In 2020, Medgene worked with a Missouri veterinarian to evaluate the EHD V2 & V6 vaccine in young fawns. The vaccine was administered to ten (10) 2-3 week old fawns. Blood serum was collected pre (Day 0) and post (Day 35 and Day 63) vaccination to monitor the immune response. A plaque reduction neutralization assay was performed to determine the neutralizing antibody titer of each fawn to both EHD V2 and EHD V6 at varying time points. Table 1 illustrates the results. A titer greater than 10 indicates that antibodies are present that neutralize the virus. The presence of antibodies provides evidence that the animal generated the intended immune response to the vaccine.

Table 1. EHD V2 & V6 Vaccine Immune Response Generated in Young Fawns

	EHDV2 Neutralizing Antibody Titer			EHDV6 Neutralizing Antibody Titer		
Tag #	**Day 0**	**Day 35**	**Day 63**	**Day 0**	**Day 35**	**Day 63**
W8	20	40	80	<10	40	40
W9	<10	40	40	<10	40	40
W10	20	≥ 320	160	<10	40	80
W11	<10	≥ 320	80	<10	80	80
W12	<10	≥ 320	≥ 320	<10	40	40
W13	<10	160	80	<10	40	80
W14	80	≥ 320	≥ 320	<10	80	160
W15	40	≥ 320	≥ 320	<10	40	80
W16	20	80	10	<10	80	20
W17	<10	80	20	<10	80	10
W18 (Control)	<10	<10	<10	<10	<10	<10

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Safety data has been collected by livestock owners and/or their herd veterinarian since the summer of 2019. Of the nearly 15,000 doses, sent to about 70 farms, only 15 farms have reported adverse reactions. In general, users typically stated that vaccination caused lameness and lethargy for 2-7 days post injection with no further complications and animals returning to normal health within a week. Safety data includes vaccine use in 2 week old fawns up to mature adult white-tailed deer. There has also been one farm that used the vaccine in elk. Adverse reactions were similar, no matter the animal's age or species. Table 2 summarizes all adverse reactions reported from the use of Medgene's experimental EHD vaccine.

Table 2. Adverse Reactions After EHD Vaccination

Adverse Reaction	Number of Reports
Lameness/Muscle Soreness	11
Lethargy	4
Injection Site Swelling	4
Poor Appetite	3
Fever	2
Reluctance to Move	2
Injection Site Sore	1

The Missouri veterinarian that tested the EHDV2&6 vaccine in young fawns provided the following conclusion about safety:

> *100% of the vaccinated fawns experienced some level of adverse post-vaccinal reactions. However, we have vaccinated 20-40 WTD buck fawns three times per year and 25-35 pregnant WTD does once per year for the past decade using a variety of commercially available vaccines. It is my clinical impression that the incidence and severity of the reactions I observed following Medgene's EHD vaccine were comparable to those which I have consistently observed over the years following administration of commercial vaccines.*

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