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## SAFETY OF WEST NILE VIRUS VACCINES IN SANDHILL CRANE CHICKS

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**Abstract:** West Nile virus arrived in North America in 1999 and has spread across the continent in the ensuing years. The virus has proven deadly to a variety of native avian species including sandhill cranes (*Grus canadensis*). In order to provide safe and efficacious protection for captive and released populations of whooping cranes (*G. americana*), we have conducted a series of four research projects. The last of these was a study of the effects of two different West Nile virus vaccines on young Florida sandhill crane (*G. c. pratensis*) chicks and subsequent challenge with the virus. We found that vaccinating crane chicks as early as day 7 post-hatch caused no adverse reactions or noticeable morbidity. We tested both a commercial equine vaccine West Nile – Innovator (Fort Dodge Laboratories, Fort Dodge, Iowa) and a new recombinant DNA vaccine (Centers for Disease Control). We had a 33% mortality in control chicks ( $n = 6$ ) from West Nile virus infection, versus 0% mortality in two groups of vaccinated chicks ( $n = 12$ ), indicating the two vaccines tested were not only safe but effective in preventing West Nile virus mortality.

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**Key words:** DNA vaccine, *Grus americana*, *Grus canadensis*, Innovator, sandhill crane, vaccination, West Nile virus, whooping crane.

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