



2020 Equine Infectious Anemia Cases in the United States

January 1– December 31, 2020

This document summarizes equine infectious anemia (EIA) cases and testing reported in the United States during 2020. Following recent guidance updates, the over 400 EIA-approved laboratories sent monthly summary testing data directly to APHIS Veterinary Services (VS). All positive cases were confirmed by the National Veterinary Services Laboratories (NVSL) and case information was compiled by the VS Equine Health Team in collaboration with State animal health officials.

Reporting of EIA testing is summarized on a calendar-year basis. During 2020, a total of 1,337,829 EIA tests were conducted, resulting in detection of 29 positive horses (Table 1.) These results compared to 1,151,584 tests and 89 positives in 2019. Figure 1 displays a map depicting reported numbers of horses and premises testing positive for EIA in 2020. Figure 2 presents a summary of EIA testing from 2001-2020. Historical data and additional information on EIA are available online at <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/equine/eia>

Table 1. Test results reported for equine infectious anemia in the United States, 2020

State	Tests Performed	Positive Horses	Positive Premises
Alabama	21,830	0	0
Alaska	838	0	0
Arizona	14,821	0	0
Arkansas	35,373	0	0
California	26,930	1	1
Colorado	22,707	1	1
Connecticut	7,501	0	0
Delaware	3,120	0	0
Florida	109,146	0	0
Georgia	39,837	3	2
Hawaii	376	0	0
Idaho	11,820	0	0
Illinois	26,902	0	0
Indiana	20,601	0	0
Iowa	18,949	6	1
Kansas	14,502	0	0
Kentucky	63,885	0	0
Louisiana	29,140	0	0
Maine	4,361	0	0
Maryland	22,564	0	0
Massachusetts	12,163	0	0
Michigan	31,515	0	0

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Minnesota	28,070	0	0
Mississippi	19,072	0	0
Missouri	53,261	0	0
Montana	19,774	0	0
Nebraska	8,901	0	0
Nevada	13,199	0	0
New Hampshire	6,065	0	0
New Jersey	16,494	0	0
New Mexico	13,745	1	1
New York	36,689	0	0
North Carolina	52,371	0	0
North Dakota	6,865	0	0
Ohio	35,302	0	0
Oklahoma	54,079	0	0
Oregon	9,043	0	0
Pennsylvania	43,546	0	0
Rhode Island	1,506	0	0
South Carolina	41,946	0	0
South Dakota	9,495	0	0
Tennessee	50,636	0	0
Texas	163,544	17	13
Utah	8,598	0	0
Vermont	5,547	0	0
Virginia	41,359	0	0
Washington	8,717	0	0
West Virginia	9,325	0	0
Wisconsin	28,253	0	0
Wyoming	13,476	0	0
Puerto Rico	56	0	0
U.S. Virgin Islands	14	0	0
U.S. Totals	1,337,829	29	19

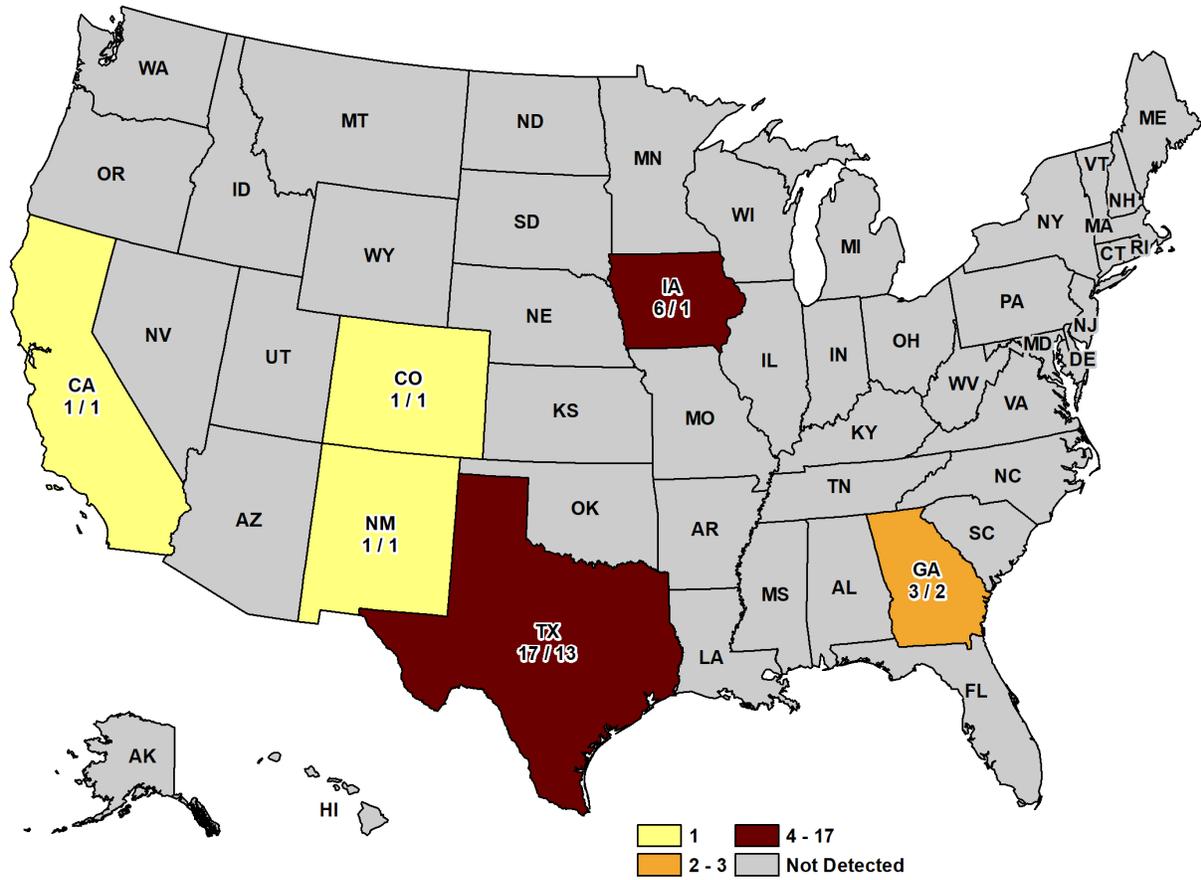


Figure 1. Reported numbers of horses and premises testing positive for EIA, 2020

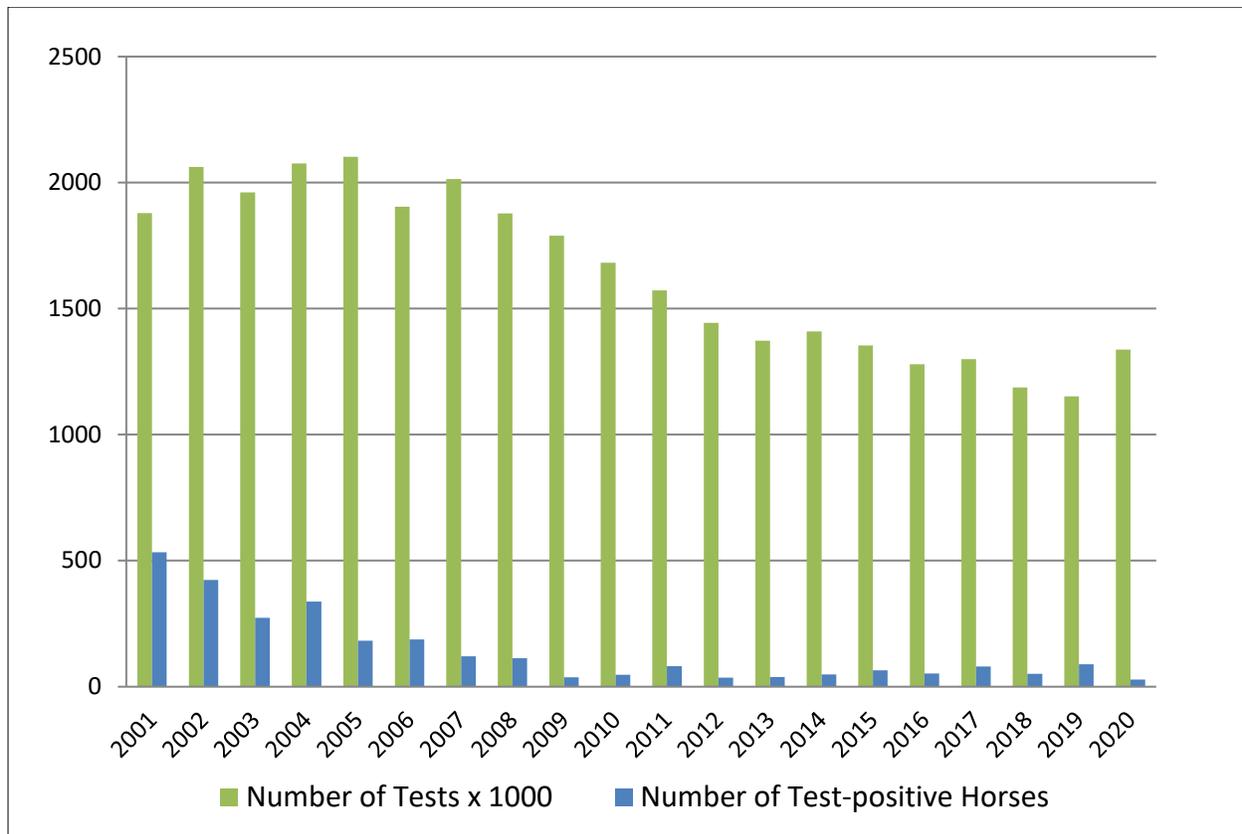


Figure 2. Reported numbers of EIA tests and positive cases in the United States, 2001-2020

Although the current prevalence of EIA in the U.S. equine population remains very low, at an estimated national prevalence of around 0.004 percent, the epidemiology of EIA-positive cases has shifted in recent years. Most EIA cases were previously found to occur from natural transmission by biting fly vectors in untested and under-tested populations. Now, increasing cases of iatrogenic transmission (disease resulting from medical activity) are being identified.

In 2020, 23 of the 29 confirmed cases of EIA were found in Quarter Horse racehorses with iatrogenic transmission either suspected or confirmed as the route of infection. Iatrogenic transmission in this population is occurring through unhygienic practices by horse trainers and owners. Practices include re-use of needles, syringes, and IV sets; administration of blood transfusions from untested donor horses; use of illegal blood products from other countries; and infectious blood contamination of multi-dose drug vials.

Some of the iatrogenic transmission cases in the Quarter Horse racehorse population are found in horses participating in unsanctioned racing. However, there are also recognized crossover cases between unsanctioned and sanctioned racing in some parts of the United States. Cases in sanctioned Quarter Horse racehorses with no obvious connection to unsanctioned racing have been identified as well. Frequently, EIA-positive cases in this emerging high-risk population are found in clusters, indicating a horse trainer or owner repeatedly using unhygienic practices that caused disease spread to multiple horses. These cases are preventable by good hygienic practices and basic biosecurity measures. Thus, increased education and outreach to trainers and owners of Quarter Horse racehorses is needed to mitigate the continued spread of EIA.

Following recent changes in APHIS guidance for EIA-approved laboratories, more comprehensive EIA testing data is now available. Figure 3 captures the number of EIA tests performed in 2020 by month. March, May, and June, respectively, were the busiest months when EIA testing occurred in 2020.

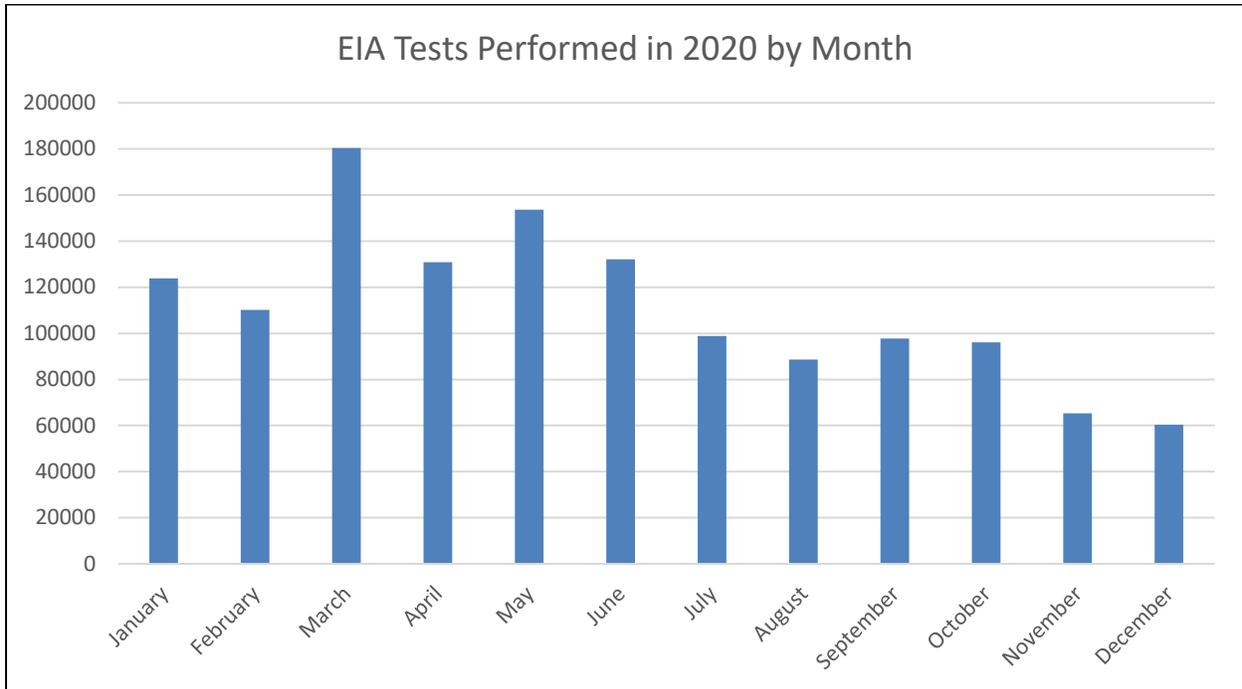


Figure 3. Reported numbers of EIA tests performed in the United States in 2020 by month

Two EIA test types are authorized for use by approved laboratories in the United States: 1. agar gel immunodiffusion (AGID) tests, commonly called Coggins tests, and 2. Enzyme-linked immunosorbent assay (ELISA) tests. Figure 4 depicts the number of AGID tests performed throughout the U.S. in 2020, compared to the number of ELISA tests performed. Both test assays were used in 2020 with nearly equal frequency.

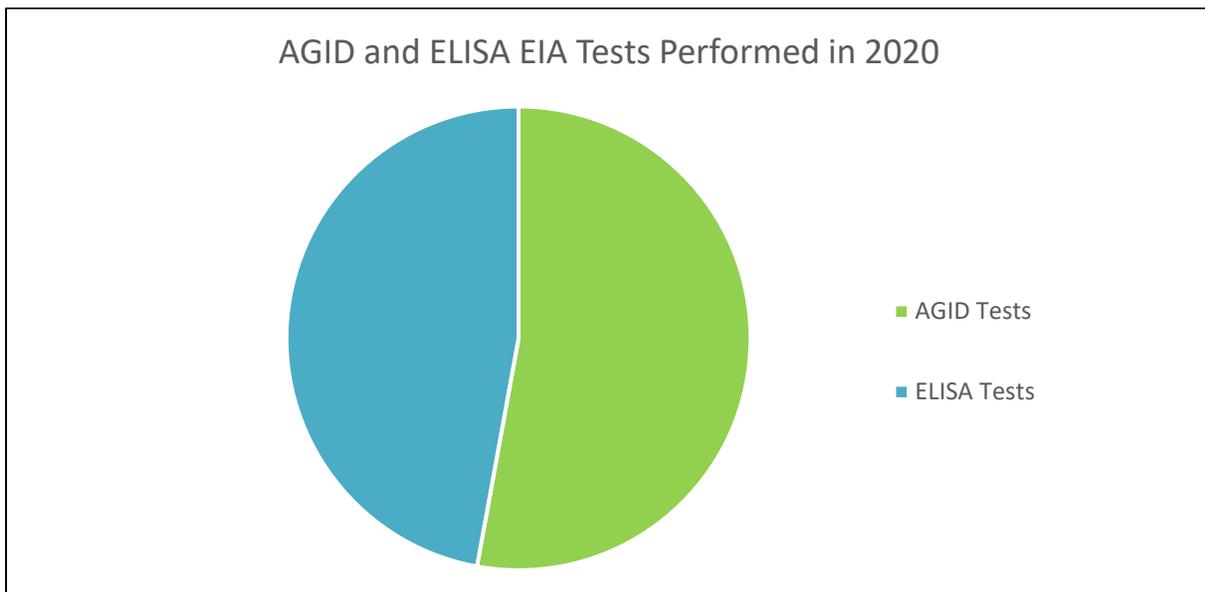


Figure 4. Reported numbers of AGID and ELISA EIA tests performed in the United States in 2020

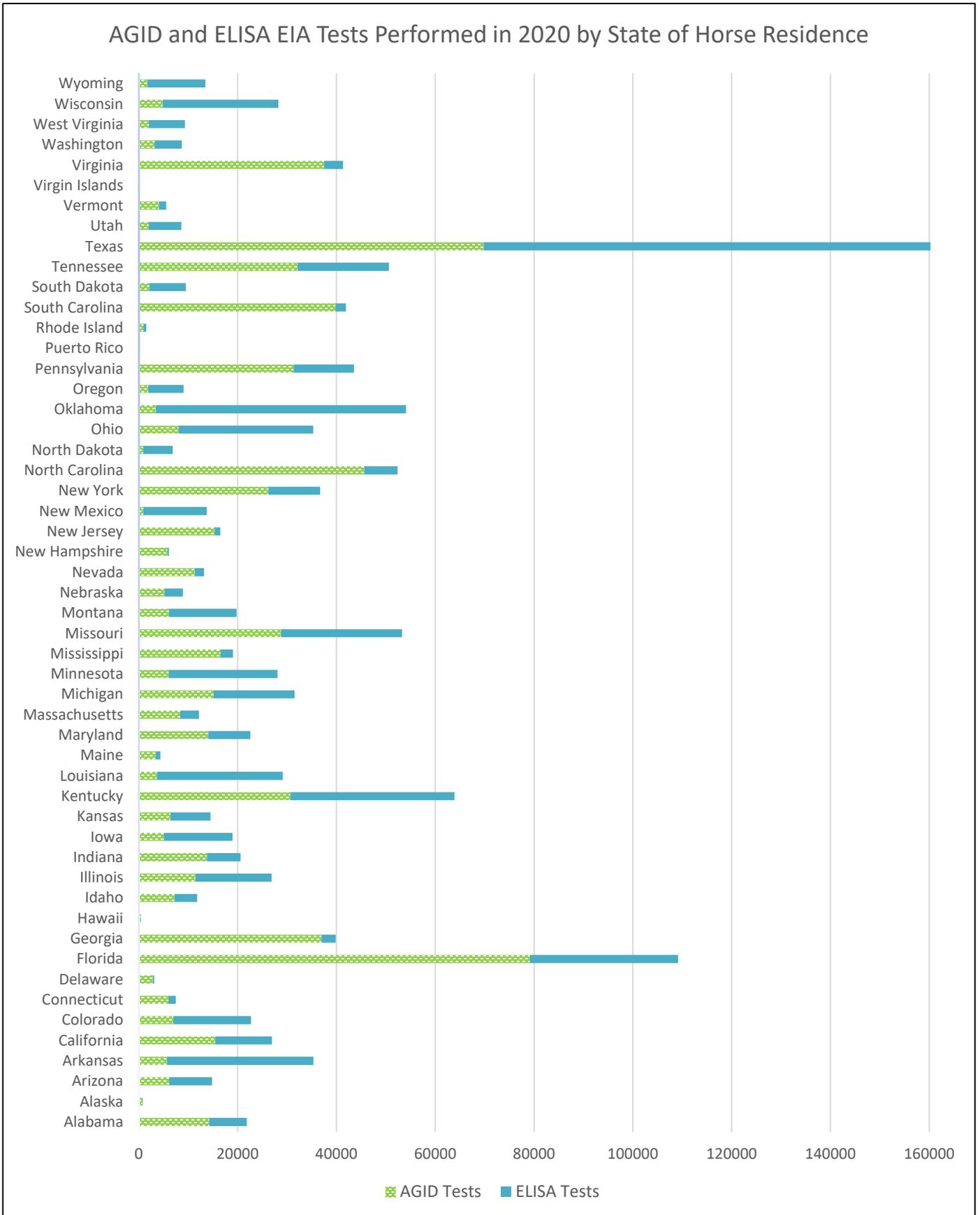


Figure 5. Reported numbers of AGID and ELISA EIA tests performed by State of horse residence in 2020

Figure 5 shows the number and type of EIA assays used to test resident horses in each State. Twenty-six States, along with Puerto Rico and the Virgin Islands, reported fewer than 20,000 EIA tests performed on their horse populations in 2020. Twenty-one States reported between 20,000 and 60,000 EIA tests performed on their horse populations in 2020. And, three States—Texas, Florida, and Kentucky—reported over 60,000 EIA tests performed on their horse populations in 2020. Horse populations in 23 States were tested more frequently using an ELISA assay than the AGID assay, while horse populations in 27 States as well as Puerto Rico and the Virgin Islands were tested more frequently using the AGID assay compared to an ELISA assay.