

## Testing for Equine Infectious Anemia (EIA) in the United States, 2015

Equine infectious anemia (EIA) is caused by a viral infection that affects the immune system of equine species. One means of natural transmission is the transfer of blood from one equid to another during interrupted feedings of large biting flies, especially horse flies and deer flies. Transfusing blood from untested, infected donor equids can also spread EIA virus to recipient equids. In addition, EIA virus can be spread iatrogenically when needles, syringes, or multiuse bottles contaminated with blood from an infected equid are used to treat another equid. There currently is no treatment or vaccine available for EIA, and equids remain persistently infected with EIA for life. Because infected equids pose a threat to other equids, most States require that equids that test positive for infection with this virus be euthanized or quarantined for life.

Because infected equids may show no signs of disease, State and Federal control programs have been instituted to eliminate inapparent carriers. Many local horse shows, pony club meetings, race tracks, trail rides, and boarding stables also require testing for EIA.

Overall, the percentage of positive EIA tests has decreased since the advent of the agar gel immunodiffusion (Coggins) test introduced in the early 1970s.

As part of the U.S. Department of Agriculture’s National Animal Health Monitoring System’s (NAHMS) Equine 2015 study, data were collected regarding equine health and management practices from a representative sample of operations with 5 or more equids in 28 States within 4 regions.<sup>1</sup> The 28 States represented 71.8 percent of all equids in the United States and 72.1 percent of all U.S. farms with equids. The 28-State target population represented 71.6 percent of all equids on farms with 5 or more equids and 70.9 percent of farms with 5 or more equids in the United States.

<sup>1</sup> **States/Regions:**

- West:** Arizona, California, Colorado, Montana, Oregon, Wyoming
- South Central:** Arkansas, Kansas, Missouri, Oklahoma, Texas
- Northeast:** Connecticut, Delaware, Massachusetts, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Wisconsin
- Southeast:** Alabama, Florida, Kentucky, North Carolina, Tennessee, Virginia

More detailed information on the study design and sampling methodology is available in NAHMS Equine 2015 tabular summary reports.

<http://www.aphis.usda.gov/nahms>

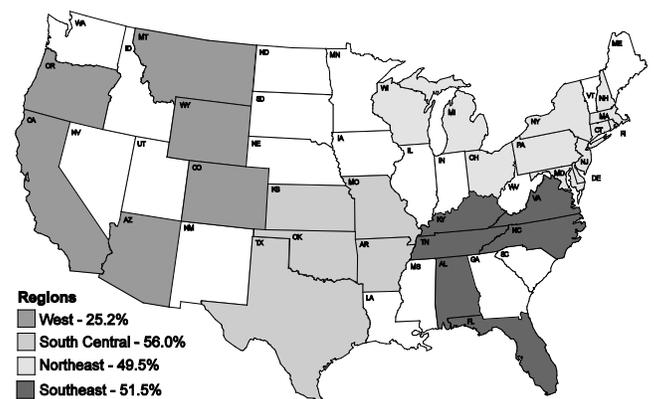
The NAHMS Equine 2015 study found that operators on 38.8 percent of operations were knowledgeable about EIA, while 7.7 percent had not heard of it before.

Average owner/operator estimates of the total costs of EIA testing, including veterinary fees, cost of transporting equids for testing, and laboratory expenses, amounted to \$40.77 per test in 2015.

The amount spent annually by the equine industry can be estimated by multiplying the average cost of an EIA test (\$40.77) by the number of EIA tests performed in the United States (1,354,390)<sup>2</sup> for an estimated total of \$55.2 million.

Overall, 47.1 percent of operations performed at least one EIA test on resident equids.<sup>3</sup> The percentage of operations that tested equids for EIA ranged from 25.2 percent in the West region to 56.0 percent in the South Central region (figure 1).

**Figure 1. Percentage of operations that tested resident equids for EIA, by region**

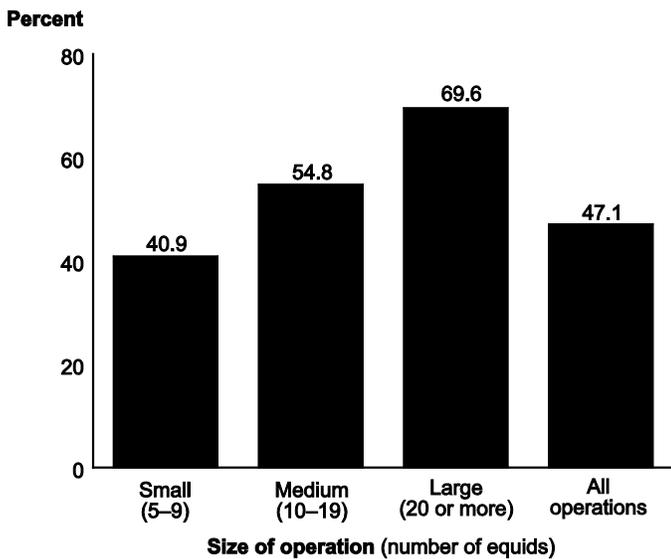


<sup>2</sup> USDA–APHIS–VS: <http://www.aphis.usda.gov/animal-health/equine-health>

<sup>3</sup> For this study, a resident equid was defined as an equid that spent or was expected to spend more time on the operation than on any other operation.

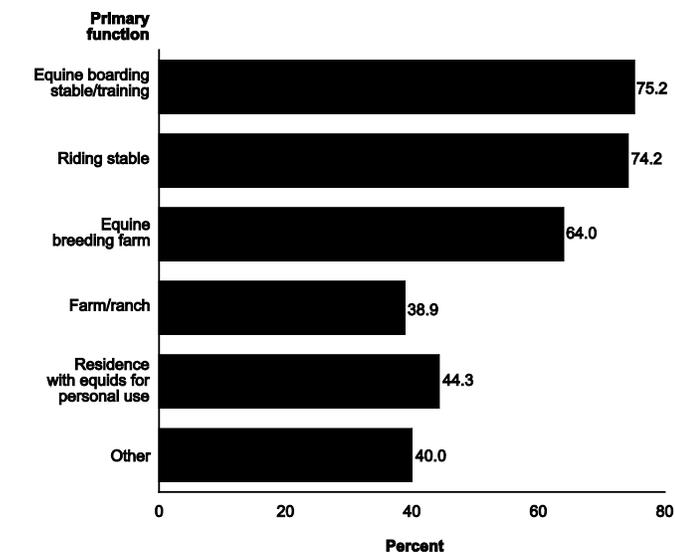
The percentage of operations that tested resident equids for EIA increased as operation size increased. For example, 40.9 percent of small operations performed at least one EIA test compared with 69.6 percent of large operations (figure 2).

**Figure 2. Percentage of operations that performed at least one Coggins or other test for EIA, by size of operation**



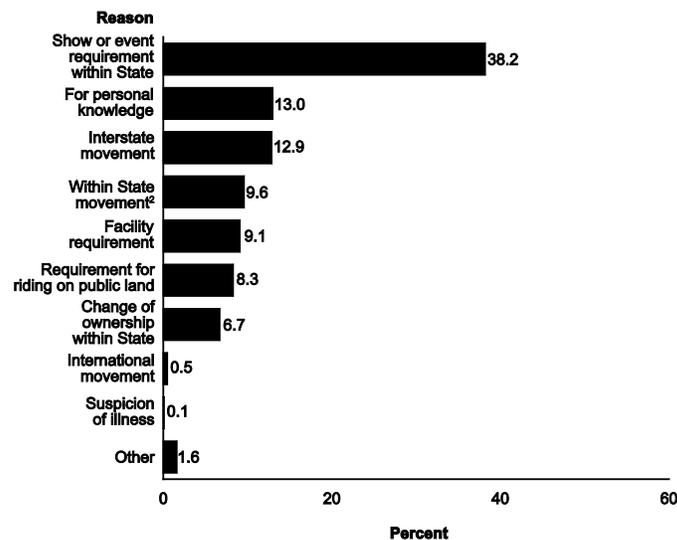
The percentage of operations that tested for EIA also varied by primary function of operation. Overall, 38.9 percent of farm/ranch operations and 44.3 percent of operations identified as a residence with equids for personal use had performed EIA tests on resident equids (figure 3). Nearly three out of four operations with a primary function of boarding/training (75.2 percent) or riding stables (74.2 percent) had performed a Coggins or other test for EIA on resident equids.

**Figure 3. Percentage of operations that performed at least one Coggins or other test for EIA, by primary function of operation**



Overall, the primary reasons operations tested for EIA were show or event requirements within State (38.2 percent of operations that tested for EIA), personal knowledge (13.0 percent), and interstate movement regulations (12.9 percent) [figure 4].

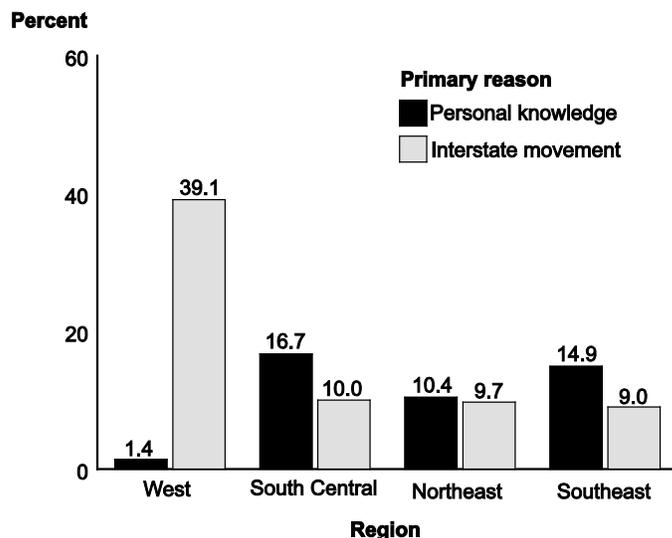
**Figure 4. Percentage of operations<sup>1</sup> by primary reason for EIA testing**



<sup>1</sup>For the 47.1 percent of operations that tested for EIA.  
<sup>2</sup>Other than change of ownership or show.

In the West region, 39.1 percent of operations indicated that complying with interstate movement restrictions was the primary reason for EIA testing, compared with about 10 percent of operations in the other regions (figure 5). Conversely, the percentage of operations that tested for personal knowledge was lower in the West region than in the other regions.

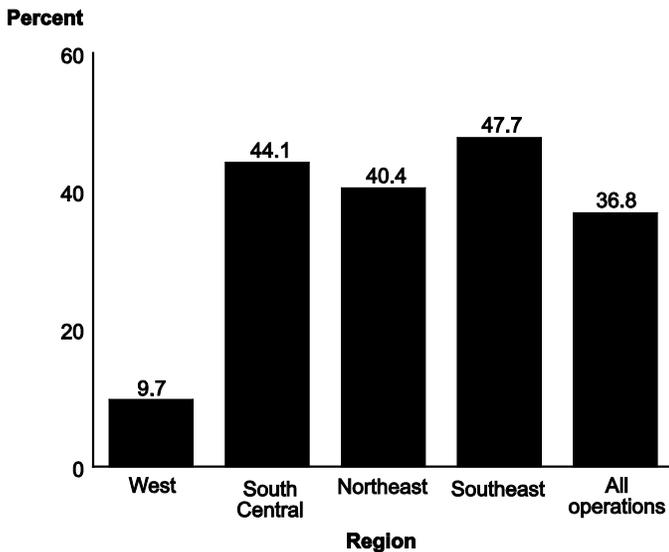
**Figure 5. Percentage of operations\* by primary reason for EIA testing, and by region**



\*For the 47.1 percent of operations that tested for EIA.

Overall, 36.8 percent of resident equids were tested for EIA at least once in the 12 months before the study interview. The West region had the lowest percentage of resident equids tested for EIA (9.7 percent), while over 40 percent of resident equids were tested in other regions (figure 6).

**Figure 6. Percentage of resident equids tested for EIA, by region**



## Summary

The equine industry spent an estimated \$55.2 million on EIA testing in 2015, which supports the ongoing surveillance for EIA. Overall, 36.8 percent of resident equids were tested for EIA in the 12 months prior to phase I of the study, leaving a substantial portion of the equine population untested.

For more information, contact:

USDA-APHIS-VS-CEAH-NAHMS  
 NRRC Building B, M.S. 2E7  
 2150 Centre Avenue  
 Fort Collins, CO 80526-8117  
 970.494.7000  
<http://www.aphis.usda.gov/nahms>  
 #730.0217

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.