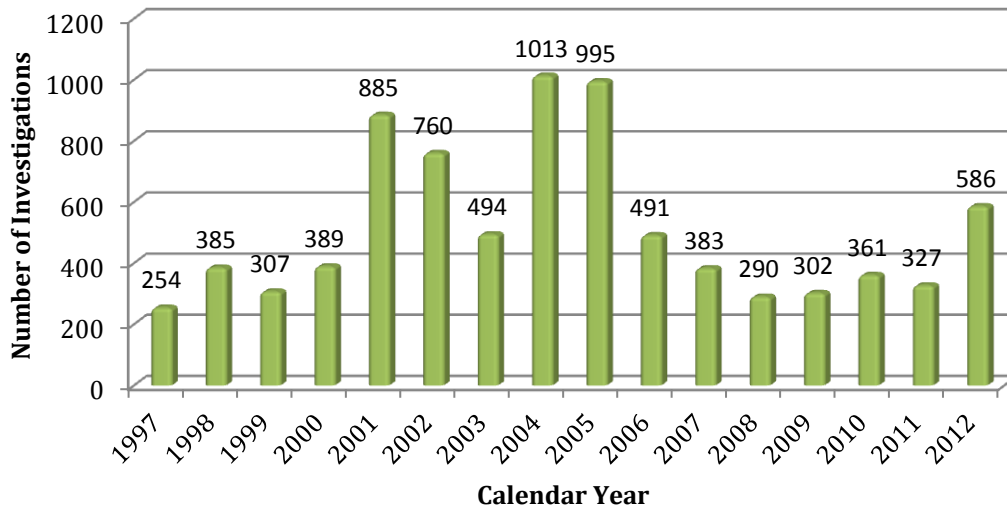


SUMMARY OF RECENT FAD INVESTIGATIONS

In the past 16 years there have been over 8,200 foreign animal disease (FAD) investigations conducted throughout the United States, ranging from a yearly low of 254 investigations in calendar year 1997 to a high of 1,013 investigations in 2004 (Figure 1).

Figure 1: FAD Investigations from 1997 to 2012

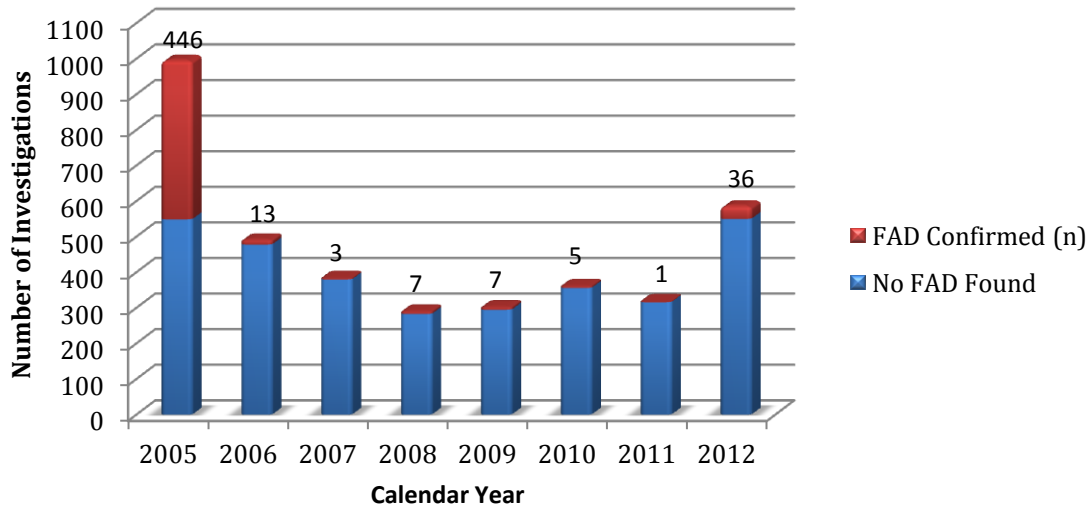


In 2005, Veterinary Services (VS) of USDA APHIS began publishing extensive annual reports on animal health in the United States (available at http://www.aphis.usda.gov/animal_health/animal_health_report/). This summary of FAD investigations was compiled from information in those reports and data from the World Organization for Animal Health (OIE) World Animal Health Information Database Interface (<http://web.oie.int/wahis/public.php?page=home>).

2005 - 2012

From 2005 through 2012, 3,735 possible FAD or emerging disease incidents were investigated, however, only a small percentage of those were confirmed to be actual emerging or foreign animal diseases. The exception during this period was the occurrence of a wide spread vesicular stomatitis outbreak that resulted in 446 confirmed FAD findings in 2005 (Figure 2). During 2012 there was a significant increase in the number of confirmed findings over recent years, also due to an outbreak of vesicular stomatitis.

Figure 2: FAD Investigations by Result, 2005 to 2012.

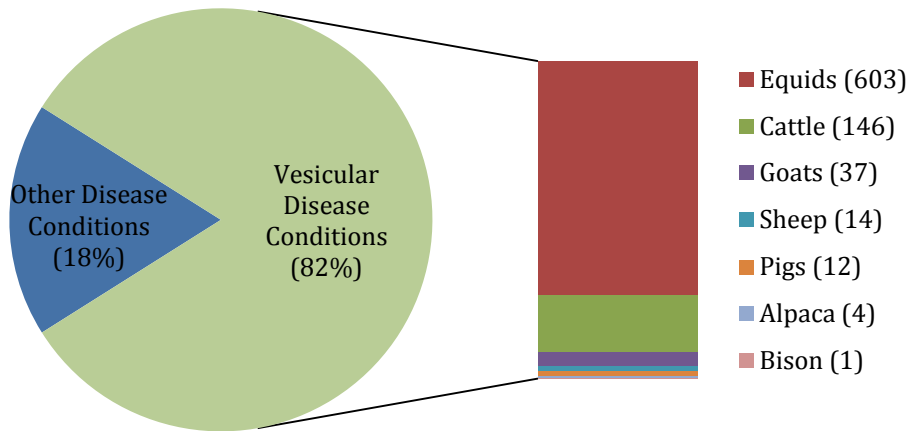


2005

In 2005, VS and State collaborators conducted 995 investigations of suspected FADs in 47 States and Puerto Rico. Colorado, Utah, and Wyoming reported the most investigations (146, 144, and 130, respectively), the majority of which were in response to a vesicular stomatitis outbreak that ultimately was reported in 6 additional States: Arizona, Idaho, Montana, Nebraska, New Mexico, and Texas. Of the 995 investigations, 446 resulted in a confirmed FAD finding, with 445 diagnosed as vesicular stomatitis. The other confirmed finding was a rabbit hemorrhagic disease outbreak.

In 2005, vesicular conditions (painful, blister-like lesions) of the muzzle and feet were the most common complaint investigated. There were 817 vesicular complaints: 603 in equids (horses, donkeys, and mules), 147 in bovids (cattle and bison), 37 in goats, 14 in sheep, 12 in pigs, and 4 in alpaca (Figure 3). Differential FAD diagnoses for vesicular conditions in equids include vesicular stomatitis. In ruminants, camelids, cervids, and swine, vesicular diseases of concern include not only vesicular stomatitis but also foot-and-mouth disease (FMD), which is a highly contagious viral infection that primarily affects cloven-hoofed animals. FMD would have a severe economic impact if it entered the United States.

Figure 3: Proportion of FAD Investigations due to Vesicular Conditions, by Species in 2005.

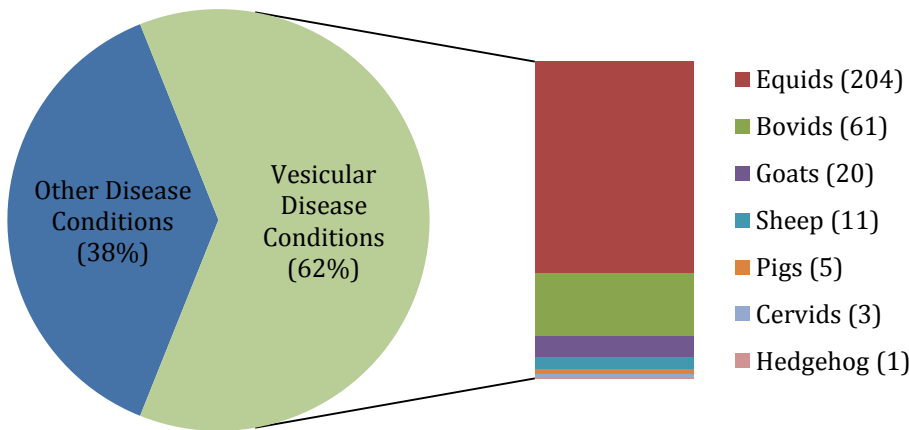


2006

In 2006, VS and State collaborators conducted 491 investigations of suspected FADs in 45 States, Puerto Rico, and the U.S. Virgin Islands. Tennessee and Texas reported the most investigations (46 and 47, respectively). Of the 491 investigations, 13 resulted in a confirmed FAD finding, with 12 diagnosed as vesicular stomatitis and one as contagious equine metritis (CEM), a transmissible, exotic, venereal disease of horses caused by the bacterium *Taylorella equigenitalis*.

There were 305 vesicular complaints for the year, with 204 in equids, 61 in bovids, 20 in goats, 11 in sheep, 5 in pigs, 3 in cervids, and 1 in a hedgehog (Figure 4).

Figure 4: Proportion of FAD Investigations due to Vesicular Conditions, by Species in 2006.

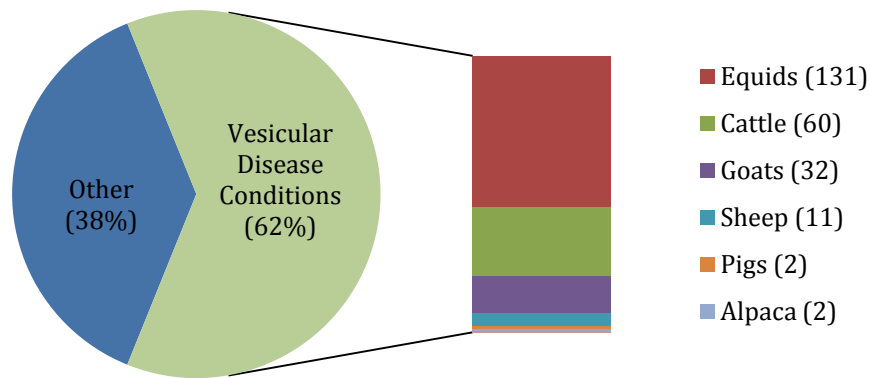


2007

In 2007, there were 383 investigations in 45 States and Puerto Rico. California and Texas reported the greatest number of investigations (31 and 30, respectively). Of the 383 investigations conducted, 3 resulted in a confirmed FAD finding. One FAD investigation of shrimp in Hawaii found white spot syndrome virus (WSSV), another confirmed Old World screwworm in a dog originating in Singapore, and the third found New World screwworm in a dog originating in Trinidad.

As in years past, vesicular conditions of the muzzle and feet were the most common complaint investigated. There were 238 vesicular complaints: 131 in equids, 60 in cattle, 32 in goats, 11 in sheep, 2 in pigs, and 2 in alpaca (Figure 5). In contrast to 2005 and 2006, none of the vesicular disease investigations confirmed the presence of vesicular stomatitis.

Figure 5: Proportion of FAD Investigations due to Vesicular Conditions, by Species in 2007.

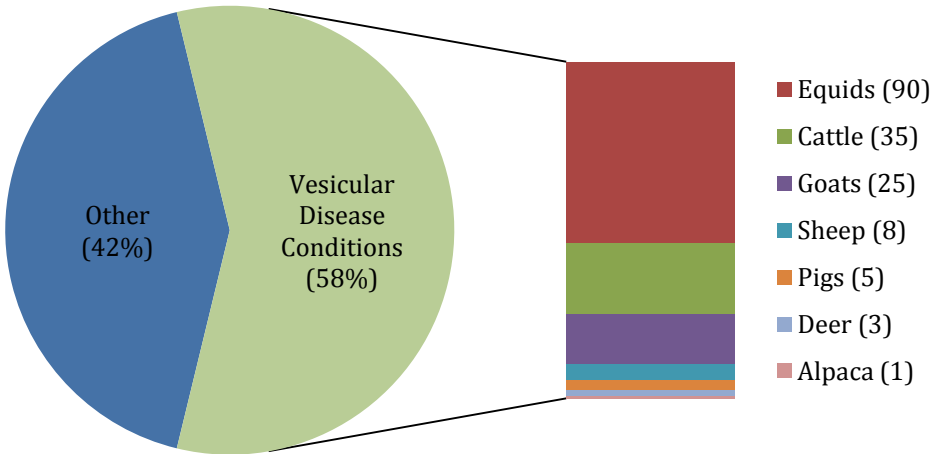


2008

VS and State collaborators conducted 290 investigations in 2008; 7 resulted in confirmed FAD findings. One FAD investigation confirmed equine piroplasmiasis (*Theileria equi*, EP), three found wildebeest-associated malignant catarrhal fever (alcelaphine herpesvirus type 1), one confirmed rabbit hemorrhagic disease, one found WSSV, and another confirmed an outbreak of CEM unrelated to the 2006 finding.

In 2008, vesicular conditions of the muzzle and feet were again the most common complaint investigated. There were 167 vesicular complaints: 90 in equids, 35 in cattle, 25 in goats, 8 in sheep, 5 in pigs, 3 in deer, and 1 in an alpaca (Figure 6).

Figure 6: Proportion of Investigations due to Vesicular Conditions, by Species in 2008.

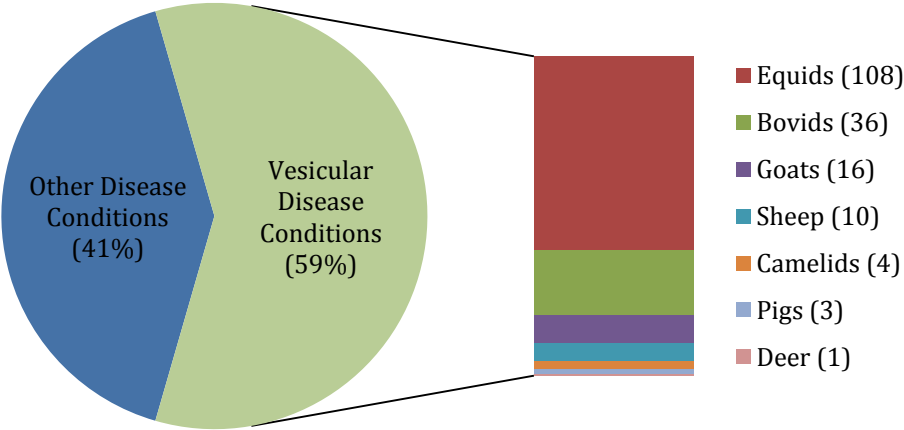


2009

Of the 302 investigations conducted in 2009, 7 resulted in confirmed FAD findings. Two of the investigations found EP and five confirmed vesicular stomatitis.

In 2009, vesicular conditions of the muzzle and feet were once again the most common complaint investigated. Of the 302 investigations in 2009 there were 178 vesicular complaints; of these, 108 were in equids, 36 in bovids, 16 in goats, 10 in sheep, 4 in camelids, 3 in pigs, and 1 in a pudu, a South American deer species (Figure 7).

Figure 7: Proportion of Investigations due to Vesicular Conditions, by Species in 2009.

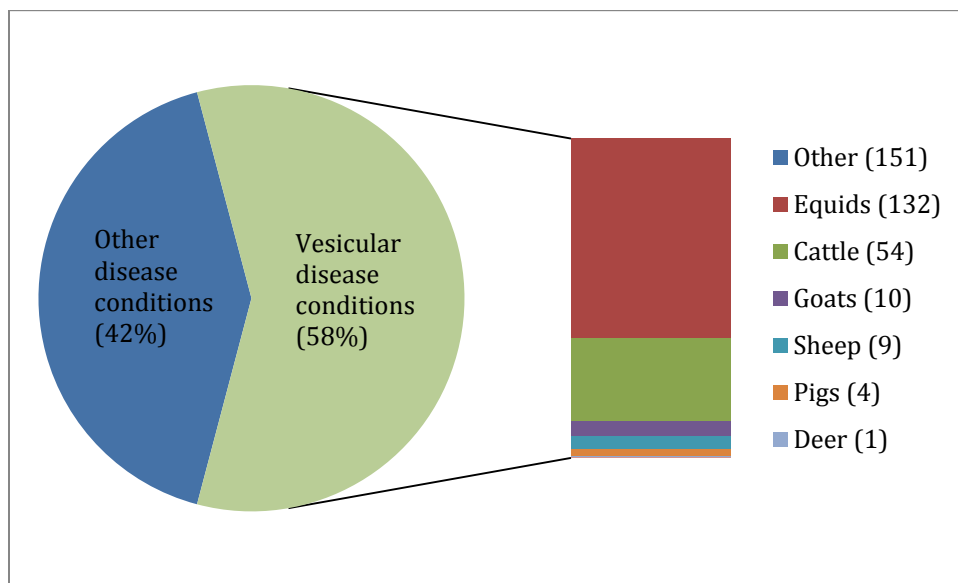


2010

There were 361 FAD investigations in 2010. Investigations were conducted in 44 States, Puerto Rico, and the U.S. Virgin Islands. States with the largest number of investigations were Texas (49) and Arizona (39). Five investigations confirmed the presence of an FAD. Two found vesicular stomatitis, one found rabbit hemorrhagic disease, and one confirmed New World screwworm in a dog originating in Venezuela. The fifth finding was a case of CEM in an imported stallion in California. All in-contact horses were tested and confirmed negative.

Of the 361 investigations, 210 were for possible vesicular disease conditions: 132 in equids, 54 in cattle, 10 in goats, 9 in sheep, 4 in pigs, and 1 in deer (Figure 8).

Figure 8: Proportion of FAD Investigations due to Vesicular Conditions, by Species in 2010.

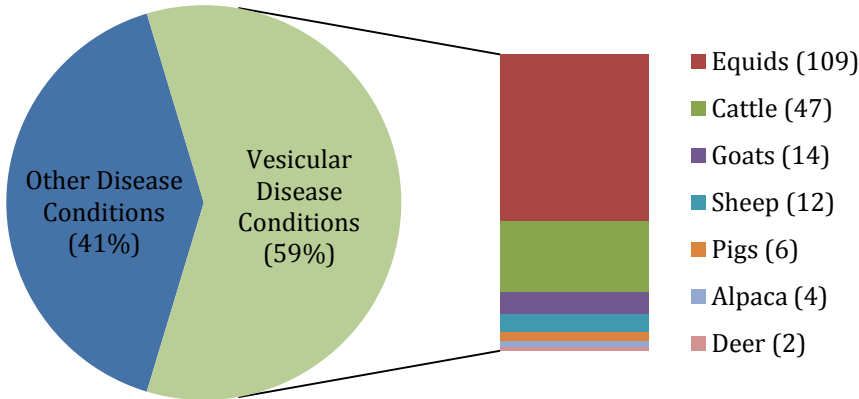


2011

There were 327 FAD investigations in 2011. Investigations were conducted in 45 States and Puerto Rico. States with the largest number of investigations were Texas (41), Arizona (26), and California (26). Only one FAD was found, a case of CEM in an Arabian stallion born in Arizona, not epidemiologically linked to cases in previous years. All in-contact stallions and mares were tested, none had positive results.

Of the 327 investigations, 194 were for possible vesicular disease conditions. Of the 194 vesicular complaints, 109 were in equids, 47 in cattle, 14 in goats, 12 in sheep, 6 in pigs, 4 in alpaca, and 2 in deer (Figure 9).

Figure 9: Proportion of FAD Investigations due to Vesicular Conditions, by Species in 2011.



2012

In 2012, VS and State collaborators conducted 586 investigations of suspected FADs in 47 States and Puerto Rico. New Mexico (113), Nebraska (54), and Texas (52) reported the most investigations. Of the 586 investigations, 36 resulted in a confirmed FAD finding. All 36 were diagnosed as vesicular stomatitis.

There were 475 vesicular complaints for the year, with 275 in equids, 152 in bovids (cattle, bison, yaks), 18 in goats, 13 in sheep, 9 in pigs, 5 in alpaca, and 3 in deer (Figure 10).

Figure 10: Proportion of FAD Investigations due to Vesicular Conditions, by Species in 2012.

