



# ULST Timisoara Multidisciplinary Conference on Sustainable Development

15-16 May 2025



## Romanian African Swine Fever Outbreaks Distribution Between 2017-2024

**Teodor POTOP<sup>1)</sup>, Doina DANEȘ<sup>1)</sup>, Maria Rodica GURĂU<sup>1)</sup> \*), Elena NEGRU<sup>1)</sup>, Sonia BEȘLEAGĂ<sup>1)</sup>, Dragoș COBZARIU<sup>1)</sup>**

**University of Agronomical Sciences and Veterinary Medicine, Bucharest, Romania**

**\*) Corresponding authors: [maria.gurau@fmvb.usamv.ro](mailto:maria.gurau@fmvb.usamv.ro)**

**Abstract:** Avian African swine fever (ASF) is one of the most severe contagious viral diseases affecting domestic pigs and wild boars. The African swine fever virus is the only member of the Asfarviridae family, it is the only DNA virus transmitted by arthropods in which it can persist for a period longer than 5 years. The disease was eradicated from Europe (except Sardinia) in the 1990s through drastic control and eradication programs. The introduction of the virus into Romania was caused by the unofficial introduction of pork products purchased from Ukraine. Romania reported to WOAHA for the year 2021 a number of 2618 new outbreaks of ASF, of which 1199 in the first semester and 1419 in the second semester. Of these, 1628 were declared in the domestic pig population and 990 outbreaks in wild boars. In the first semester of 2022, Romania recorded 775 new outbreaks of ASF, of which 336 outbreaks were declared in the domestic pig population and 439 in wild boars. In the second half of 2022, 315 new outbreaks of ASF were declared, of which 167 outbreaks were recorded in domestic pigs and 148 in wild boars. In 2023, 819 new outbreaks of ASF were reported on the territory of our country. Of these, 530 outbreaks were identified in the domestic pig population and 289 in wild boars. In Romania's latest notification to WOAHA, 507,000 cases in domestic pigs and 597 in wild boars are recorded. Thus, in Romania, in the period 2017-2024, a number of 7,450 new outbreaks of ASF were reported to WOAHA. Considering the number of African swine fever outbreaks in our country in the last 7 years, and the endemicity of the infection, monitoring of pigs and wild boars, and very rigorous control of their movement are the only tools available to control the disease.

### • Introduction

The African swine fever (ASF) is one of the most dangerous contagious viral diseases affecting domestic pigs and wild boars. Although ASF spreads slowly, unlike classical swine fever (CSF), the disease is constantly expanding its distribution area. In a herd of infected pigs, the disease affects a significant percentage of individuals, but not the majority of animals, which complicates diagnostic investigations in the early stages of ASF [Beltrán-Alcrudo et al., 2017]. In a population of infected wild boars, ASF spreads at a rate of 10-12 km per year, in the absence of an additional “human” factor, which, among other factors, plays a key role in the advancement of the disease over long distances (up to several hundred kilometers) in epizootic countries [Podgórski et al., 2022]. The virus was introduced to Romania through pork products purchased from Ukraine and brought illegally into the country [Martin et al., 2021]. In total, in 2017, Romania reported 4 outbreaks of ASF. The purpose of this research was to make a brief review of African swine fever outbreaks that occurred on Romanian territory in the last decade.

### • Material and method

In order to make this analysis there were selected data reported to the World Organization for Animals Health (WOAH), European Food Safety Authority (EFSA), National Veterinary Sanitary and Food Safety Authority (ANSVSA) and PubMed database. The scientific articles studied for this research were published between 2017 and 2024. Even if the period used for this study is seven years, the aim was to obtain an overview of the research done on African Swine Fever and the outbreaks that occurred in our country during this period of time. The purpose of this study is to find solutions for the spread of the ASF virus.

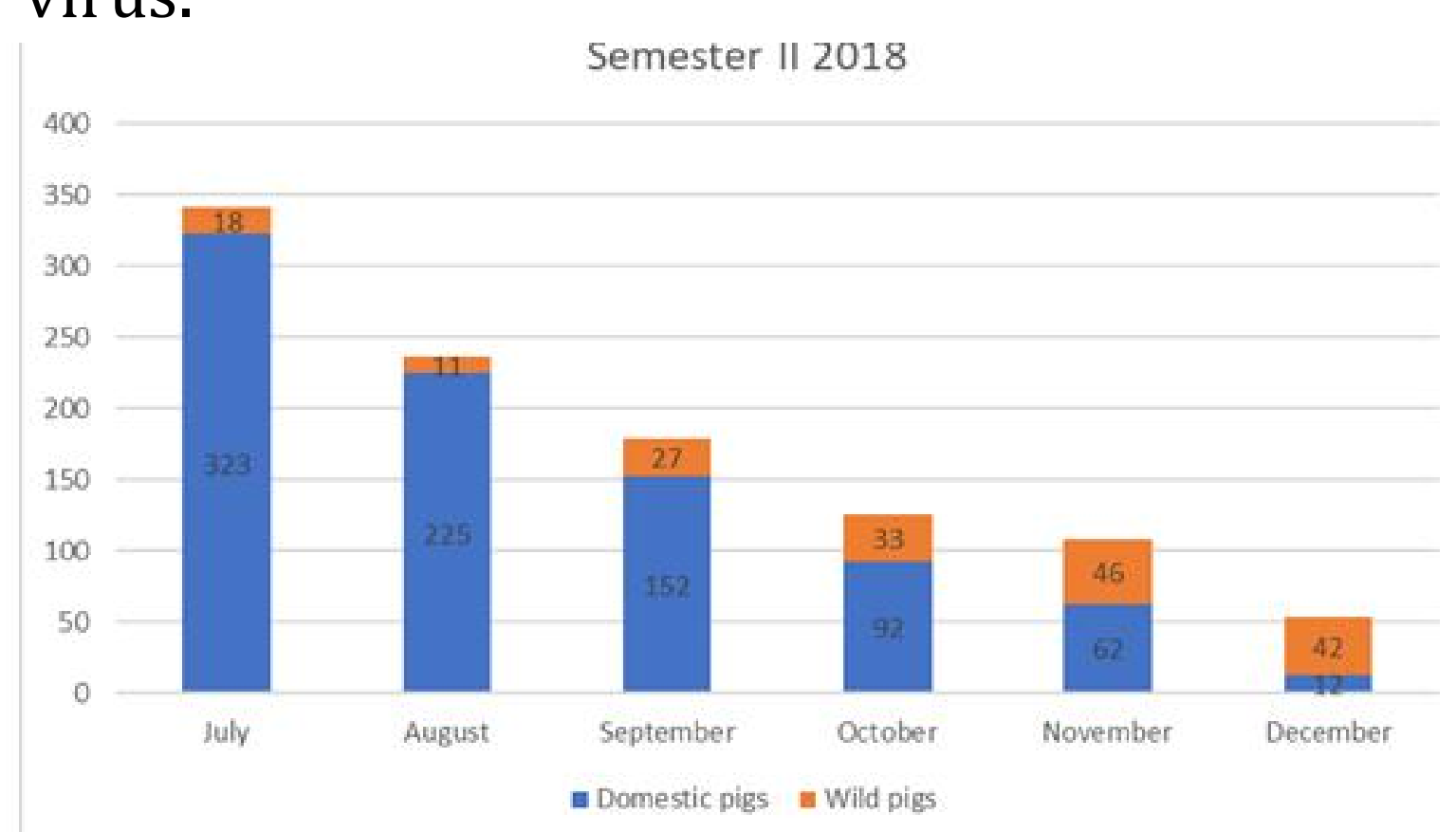


Figure 1. ASF outbreaks reported in Romania in 2018, second semester (after WOAHA).

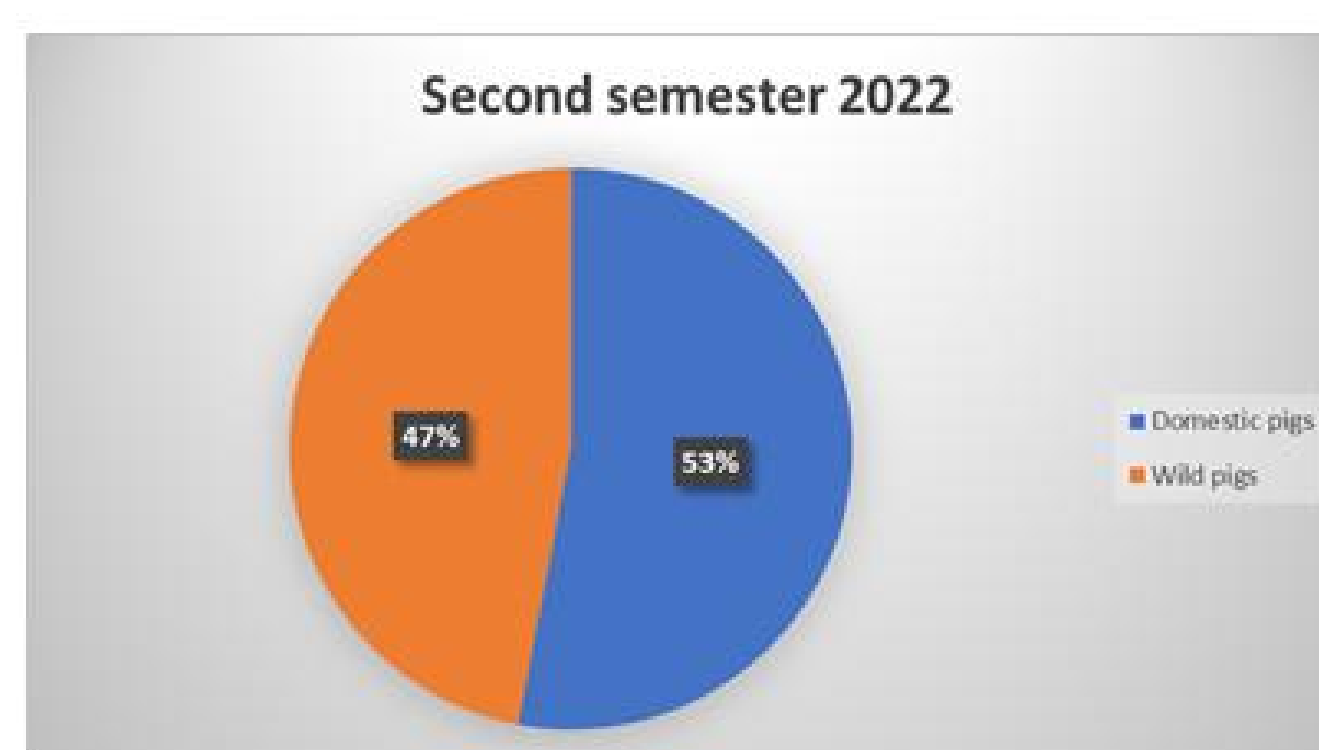


Figure 2. Distribution by species of new ASF outbreaks in the second semester of 2022

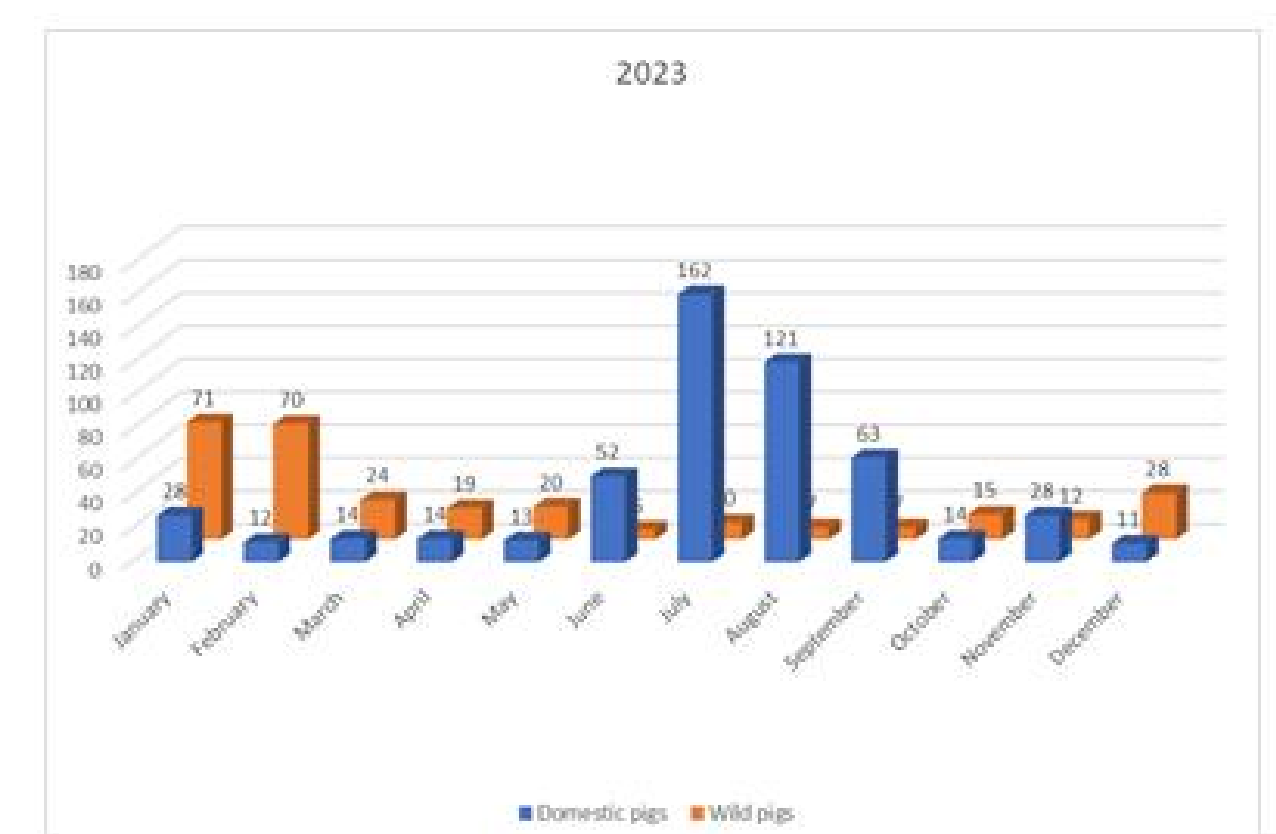


Figure 3. Monthly reporting of ASF outbreaks in 2023 (according to EFSA)

### • Results and discussions

In 2017, Romania reported 4 outbreaks of ASF. In the first half of 2018, in Romania ASF, was spread to the wild pig population, with 296 new outbreaks reported, both in the domestic and wild sectors. The counties where new outbreaks were detected were Satu Mare, Bihor, Brăila and Tulcea. In Satu Mare, a new outbreak of ASF in the domestic population was declared in March and an outbreak of ASF in wild boars in May. Bihor County reported 5 outbreaks in domestic pigs in June. In the same month, Brăila County reported 1 outbreak in domestic pigs, and Tulcea County reported 288 outbreaks, both in domestic and wild pigs. In the second half of 2018, Romania recorded 1043 new ASF outbreaks, of which 866 in domestic pigs and 177 in wild boars (Figure 1). In the second semester of 2022, 315 new outbreaks of ASF were declared on the territory of our country, of which 167 outbreaks were recorded in domestic pigs and 148 in wild pigs (Figure 2). In 2023, 819 new outbreaks of ASF were reported in our country. Of these, 530 outbreaks were identified in the domestic pig population and 289 in wild boar. The monthly reporting of ASF outbreaks for 2023, both in domestic pigs and wild boar, is represented in Figure 3. So, from 2017 to 2024, the most cases of ASF were recorded in 2021, namely 2618 new outbreaks, following in descending order 2018 with 1339 ASF outbreaks and 2022 with 1090 new ASF outbreaks in both domestic and wild pigs (figure 4).

### Conclusions

July, August and September recorded the most numerous cases of the African Swine Fever in 2018 and 2023 in Romania and Bihor and Satu Mare counties register the high number of new outbreaks of disease. The year 2021 register the high cases of ASF from the first diagnosed case till now, following in descending order 2018 and 2022 in both domestic and wild pigs. Considering the number of African swine fever outbreaks in our country in the last 7 years, and the endemicity of the infection, monitoring of pigs and wild boars, and very rigorous control of their movement are the only tools available to control the disease.

**Acknowledgement:** This work was supported by a grant of Work Program of the Ministry of Agriculture and Rural Development of Romania, project number ADER 10.1.1., 2024-2026.

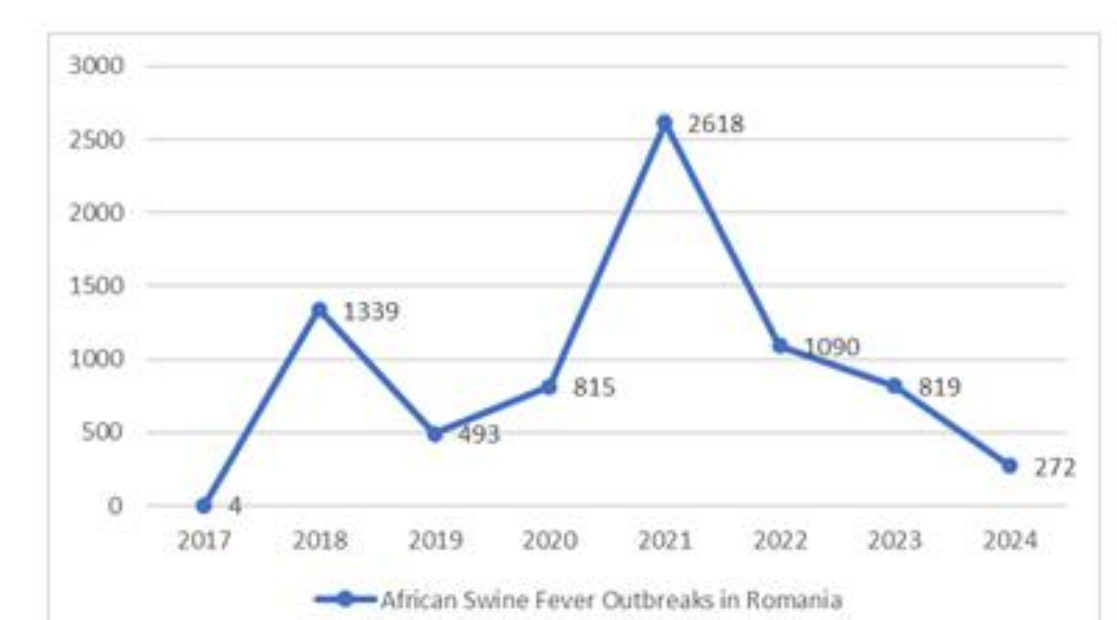


Figure 4. Evolution of ASF outbreaks on the territory of Romania 2017- 2024

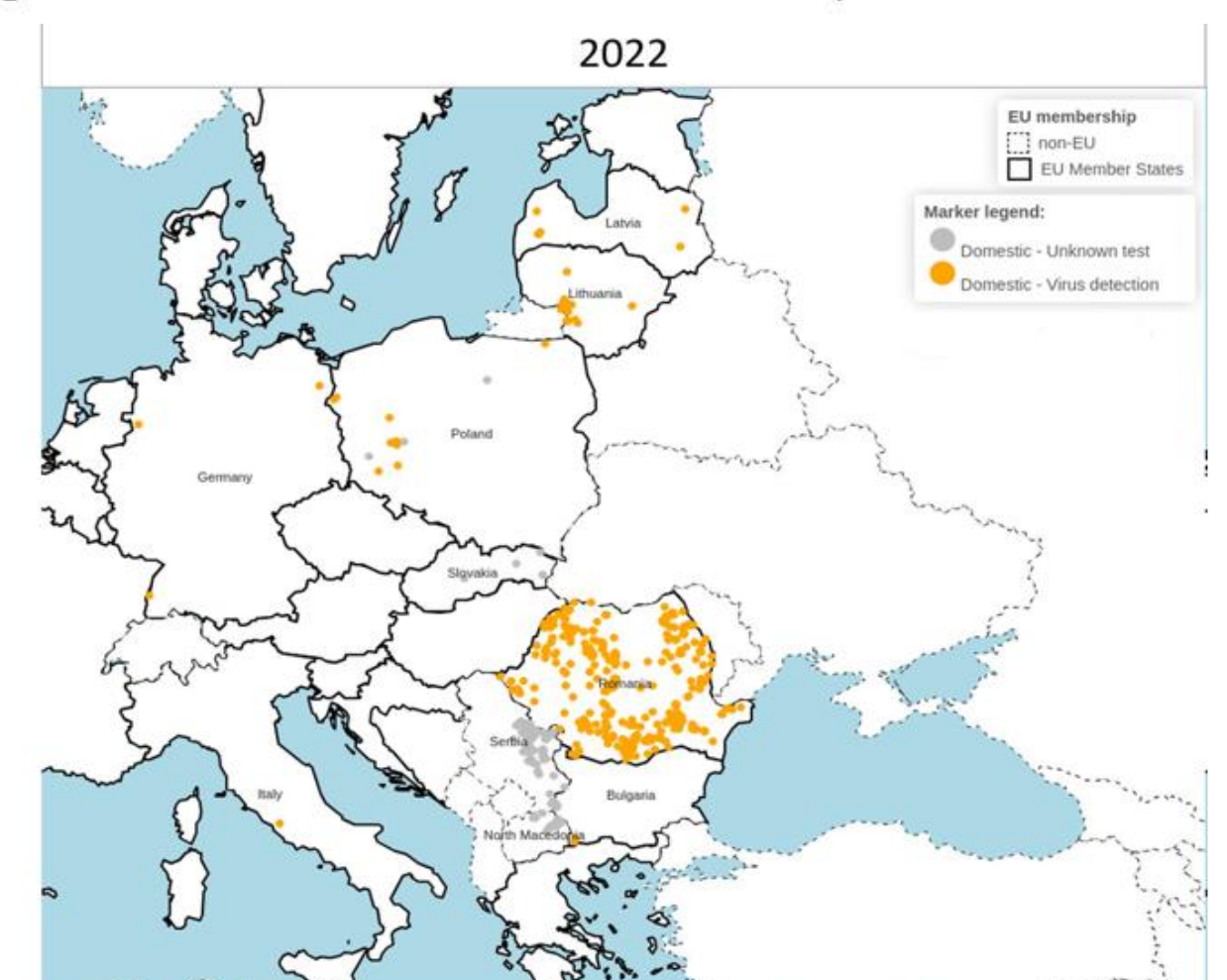


Figure 5. Geographical distribution of ASF outbreaks in the domestic population in 2022 (according to EFSA)