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Thematic portfolio



African swine fever: responding to the global threat



PERSPECTIVES

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African swine fever (ASF), caused by ASF virus (ASFV) of genotype I, found ideal conditions for endemicity on Sardinia in the free-ranging pigs kept in the inner, mountainous areas of the island, where these pigs live in close contact with wild boar [1].

Until recently, any attempt to eradicate the disease encountered strong resistance from local farmers, who considered this traditional way of keeping pigs as part of their cultural identity. Despite free-ranging pigs posing a constant threat to domestic pigs, preventing disease on high-biosecurity farms has almost always been successful, but this task has been much more difficult on backyard farms [2].

The new programme

In 2015, a new ASF eradication strategy (*EP-ASF-15-18*) was implemented under the authority of the 'Project Unit', a body that was fully empowered by the Regional Government and comprised the heads of several branches and bodies of the regional administration, alongside national, regional and local Veterinary Services and experts. Based to a large extent on conventional veterinary measures adapted to the local situation, the new strategy favoured financial incentives for good husbandry practices and biosecurity over compensation to affected farmers. It also considered the socio-economic and cultural aspects associated with ASF occurrence [3]. Veterinary controls were strengthened all along the pig production chain in an increasingly rigorous manner. More stringent rules were applied to hunting, including safe disposal of wild boar offal. Control measures were accompanied by very intensive education, awareness and communication activities, targeted at farmers, hunters and the rural population. Open-air, double-fenced pig farms were authorised and subsidised, as an alternative to keeping free-ranging pigs. However, almost 5,000 free-ranging pigs had to be culled during some 60 military-type actions carried out from November 2015 [2].

The current situation can be summarised as follows:

- **Domestic pigs:** The actions taken have led to decreasing numbers of outbreaks on domestic pig farms, with the last outbreak occurring in September 2018.
- **Free-ranging pigs:** Evidence gathered over the last few years indicates that free-ranging pigs acted as the main source and reservoir of ASFV; this information helped to overcome resistance to the culling of free-ranging pigs.
- **Wild boar:** A large amount of data suggests that, in Sardinia, ASFV does not persist in wild boar alone for more than a few years if the boar are not re-infected by free-ranging pigs or domestic pigs.



Free-ranging pigs in central Sardinia. © Stefano Cappai

Complete eradication will most likely be achieved in the near future

The very favourable ASF situation in Sardinia after the implementation of the new programme is summarised in Table I.

Table I. African swine fever (ASF) situation in Sardinia

Wild boar (estimated current population in Sardinia: around 90,000 head)				Free-ranging pigs					Domestic pigs (estimated current population in Sardinia: 180,000 head)	
ASF virus findings on hunted wild boar in the so-called ‘infected area’ (central Sardinia and surroundings) during the hunting season (HS) from November to January				Indirect evidence indicated that ASF was endemic in free-ranging pigs in central Sardinia					Outbreaks in the whole of Sardinia	
	Tested	Virus+	%							
HS 2012/13	2,363	11	0.46						2012	74
HS 2013/14	2,047	40	1.95						2013	109
HS 2014/15	1,479	9	0.61						2014	40
Spring 2015: Start of the new eradication programme										
HS 2015/16	2,859	13	0.45	478 free-ranging pigs culled between November 2015 and September 2016					2015	16
HS 2016/17	4,106	39	0.65	As from December 2017: depopulation of >4,500 free ranging pigs in central Sardinia					2016	23
					Culled	Tested	Virus+	%		
HS 2017/18	5,188	24	0.46	Dec. 2017 / June 2018	2,408	1,317	53	2.9	2017	17
HS 2018/19	5,587	4	0.072	July 2018 / Feb. 2019	1,429	840	15	1.8	2018	5
HS 2019/20	6,137	0	–	Winter 2019/20	665	384	0	–	2019	0

It is possible that ASFV may be occurring at very low levels in wild boar in some remote areas, as decreasing numbers of seropositive wild boar are still found. However, these seropositive wild boar do not appear to play a significant epidemiological role, and the path towards eradication is very clear.

✖ Complete eradication will most likely be achieved in the near future, provided that current measures are continued.

Acknowledgements

The author wishes to thank all those who, together, have achieved the excellent results briefly summarised in this paper: farmers and hunters, the Regional Government and Administration of Sardinia, the Ministry of Health, Sardinian Veterinary Services, Forest Guards, and the Regional Agencies for Agricultural Development (Laore), and, for the forests, the University of Sassari, the Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche, and the Istituto Zooprofilattico Sperimentale della Sardegna.

<http://dx.doi.org/10.20506/bull.2020.1.3132>

AROUND THE WORLD

▶ SUCCESS STORIES

The last mile in the eradication of ASF in Sardinia

SUMMARY

African swine fever (ASF) has been endemic in the island of Sardinia, Italy, since 1978. A new disease control strategy implemented in the last few years has been very effective, and final ASF virus eradication appears very close.

KEYWORDS

#African swine fever (ASF), #eradication, #Italy, #pig production, #risk analysis, #wild boar.

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