

Assessment of atrophic turbinate lesions in Italian farms



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INTRODUCTION

Atrophic Rhinitis (AR) is a disease impacting the upper part of the respiratory tract characterized by hypoplasia of nasal turbinates associated with decreased performance and increased respiratory problems.

Routine diagnosis is uncommon in Italy. This absence of regular diagnosis can lead to underestimate the prevalence and the impact of the disease. The aim of the present study was to evaluate the presence of AR lesions in Italian pig farms at risk.

MATERIALS AND METHODS

Veterinarians from Northern Italy were asked to select for this survey farms with no to low AR vaccination plan (e.g. gilt vaccination only, recent vaccination plan discontinuation).

On these farms, cross sections of the snout of the 3-5 dead pigs considered at risk and weighing 20-180kg were scored (0-22 scale). Pictures of turbinates were taken and were submitted to a blinded expert for scoring and procedure controls. Vets answered to a questionnaire about farm practices as well.

RESULTS

Seventeen vets have submitted pictures and questionnaires from 25 farms. In total 97 noses were scored. From nasal pictures, 70% of the sections were correctly performed. Among these, complete absence of lesions was found in only 15%; 53% showed low score (1-7), 24% medium score (8-14) and 9% high score (15-22). At the farm level, 19/25 farms provided correct sections for scoring, among which 11 farms provided sections showing moderate to severe lesions.

Figure 1. Compliance results for snout-sectioning procedure

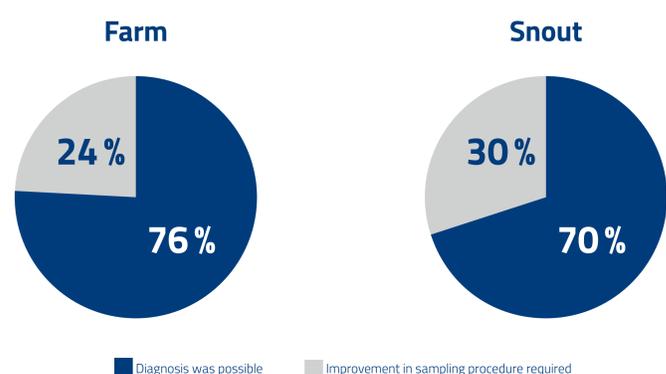


Figure 2. Distribution of the nasal turbinate lesion scores among 68 snout sections collected on 19 Italian farms with no to low AR vaccination plan

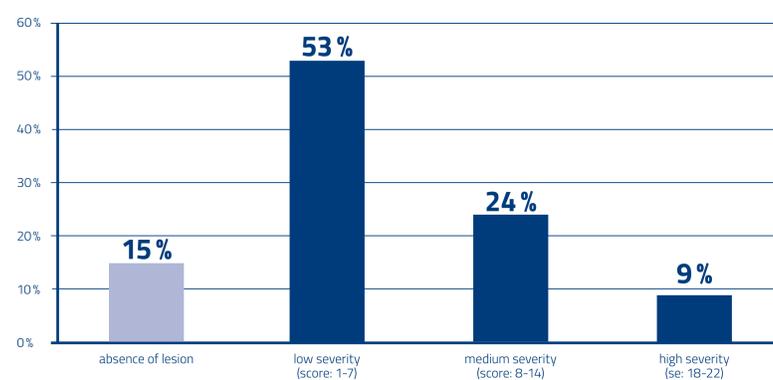
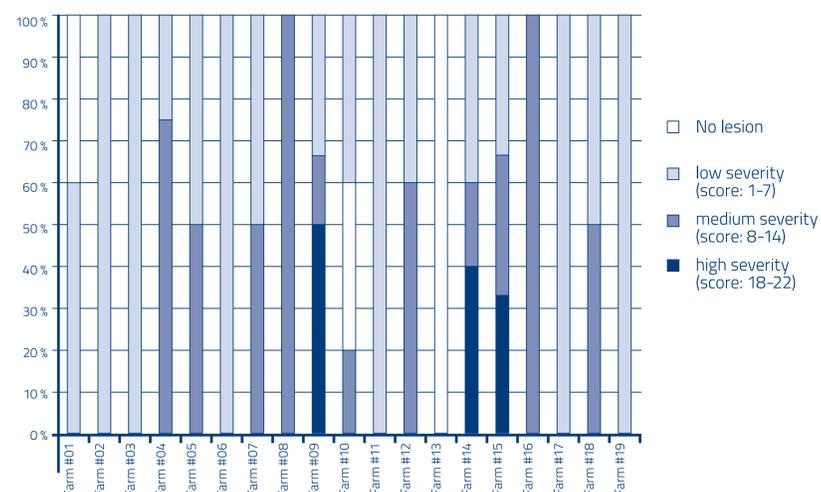
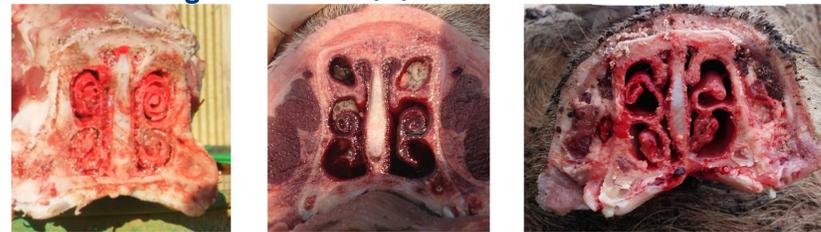


Figure 3. Prevalence of nasal turbinate lesion scores among 19 Italian farms with no to low AR vaccination plan



Photos. Example of snout section pictures. From left to right: scores of 0, 7, and 16



CONCLUSION AND DISCUSSION

This study possibly revealed that the impact of AR in Italian farms could be underestimated since 35% of interpretable snout sections collected in farms with limited prevention program showed non negligible medium to severe AR lesions. Nevertheless no bacteriological exam was performed to confirm the etiology of these cases. This observation advocates a reinforcement of disease surveillance routines on farm by encouraging regular diagnosis and according to best practices.

