





IMPACT OF OUTDOOR FARMING ON PIG WELFARE: INSIGHTS FROM A STUDY IN ITALY

L. Deiana¹, S. Santini¹, D.Bochicchio¹ ¹ CREA, Via Beccastecca 345, 41018 San Cesario sul Panaro, Italy

INTRODUCTION

The current scientific position on animal welfare promotes husbandry systems that allow the free expression of the species' ethogram. For pigs, access to the open air and grazing areas represents an added value in terms of welfare, as a place where they can express their rooting behaviour. This study was carried out within the European ROAM_FREE programme and focused on five Italian organic farms where pigs are reared outdoors and grazing is part of the daily ration

OBJECTIVE

The objective is to obtain information on management practices that promote animal welfare animal welfare and to understand if and how these influence parasitic infections in pigs.



MATERIAL AND METHODS

			FARMS			
FARM	CATEGORY	OTHER BREED	CLIMATE	GRAZING ROTATION	PUDDLES	PASTURE*
1	Pigs	Cow and sheep	Mediterranean	No	-	S/T
2	Pigs	Cow	Mediterranean	No	-	S/T
3	Pigs	_	Mediterranean	No	Yes	S/T
4	Pigs	Goats and chicken	Continental	No	Yes	BARE LAND
5	Pigs	Cow	Mediterranean	Yes	-	G/S/T

*Pasture: Grass (G)/Shrubs (S)/Tress (T)

RESULTS

FARM	HUMAN INTERACTION	CATEGORY	DAYS OF LIFE	N ANIMALIN GROUP	APPROACH TEST** (sec)	STEREOTIPYES	MEDICAL TREATMENT	BCS	PARASITES *
		piglets	60	20	63	not detected	no	3	S
1	manual feeding	Growing pigs	120	15	14	not detected	no	3	
		Fattening pigs	365	40	26	not detected	no	3	

WELFARE: the PIG LOW app.

The PIG LOW app was used to evaluate various aspects of animal behavior and environmental conditions. This method allowed them to objectively evaluate animal welfare and understand the management practices in place. In particular, regarding the welfare we focused on interaction with humans, stereotypes, health and nutrition status (BCS).



PARASITIES



Faeces samples were collected for each farm visit. In total there were about 10 samples for each pig category (sow, boar, weaned, grower, finisher).

All samples were stored at 5 °C until processing. Faecal egg counts were estimated using the McMaster method.



Mean Eimeria (upg) Mean Ascaridi (upg) Mean SGI (upg)

2	Observation by distance/approac h by vehicles	Sow with piglets	-	9	not detectable	not detected	no	3	S	1	2 3 4 Farms Mean Eimeria (upg) Mean Ascaridi (upg) Mean SGI (upg)
3	Observation by distance/approac h by vehicles	Fattening pigs	270	20	83	not detected	no	3	S-T	8000	PARASITE-Spring 2023
4	manual feeding, Woofer, visitors	Fattening pigs	120	6	36	not detected	no	3	S-A-T	7000 6000 ଫୁ 5000	
5	Observation by distance/approac h by vehicles	Fattening pigs	150	20	133	not detected	no	3	S-T	U 9.4000 2000 2000	

*Parasites: Oesophagostomum (S), Ascaris suum. (A), Tricuris (T)

** Approach test which consists of measuring the time (in seconds) elapsed before the first pig approaches and/or touches after entering the pen. Practically, before starting the test, enter the pen and walk around calmly to ensure that all the animals have noticed you. Once you are standing still, start the timer and record how long it takes for the first pig to approach and touch you. If no pig touches you within 60 seconds, stop the timer and end the test.

DISCUSSION AND CONCLUSIONS

From the data provided by the PIGLOW app, we observed different situation between the farms about the pigs' trust in humans due to the different feed management. On farms where the farmer manually administers the feed (1,4), establishing a positive association with the animal, the approach time calculated with the app was 26 and 36 seconds respectively. In contrast, on farms 3 and 5, where the distribution of food is done automatically (silos) or by vehicles, the pigs did not approach. These results suggest the potential of positive interactions with humans to improve pig welfare through the inclusion of regular positive activities in routine management, such as manual feeding (Schmitz et al., 2020). This can benefit pig welfare in the short term through positive experience, as well as providing long-term benefits in the form of stress resilience (Rault et al., 2020). Despite the higher risk of parasitic infestations in outdoor environments, the study suggests that appropriate management practices can effectively mitigate these risks. This leads that the animals feel relaxed and safe, without any sense of danger, which is an excellent outcome from a welfare perspective.



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Schmitz, L., Ebinghaus, A., Ivemeyer, S., Domas, L., and Knierim, U. (2020). Validity aspects of behavioural measures to assess cows' responsiveness towards humans. Appl. Anim. Behav. Sci. 228:105011. doi: 10.1016/j.applanim.2020.105011