Stress management expertise in relation to modern animal farming

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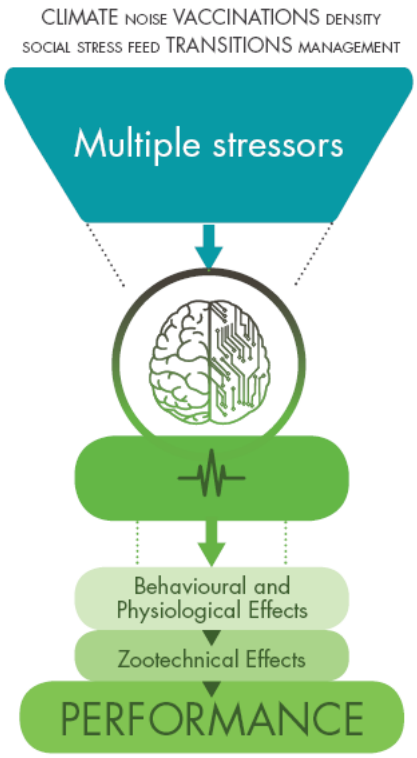
Stress is always present in modern farming and even if some efficient management conditions can decrease the level stress, some others will definitely increase it. Stressors can be classified in different categories as explained in our previous article. Social stressors resulting from the interactions with individuals of the same species (high density, re-allotment) and stressors related to handling by humans, weaning and transport can be particularly difficult for the animals. There are many consequences to stress in animal production and lower profits will eventually be one of them. However, reducing the negative effects of stress is still possible, especially with an approach focused on individual "Better-Being". Helping animals to cope with stress is a benefit proposed by an innovative sensory solution developed by Phodé. Tested under the various defined stress conditions typically found in husbandry, this solution modulates stress perception thanks to a cerebral mode of action.



Offset the drop in individual performance due to stress relating to high-density poultry farming

High-density animal farming methods always result in lower feed consumptions. This phenomenon is often widely accepted, since the goal is to maximize productivity of the farm overall and not the individual animal. That being said, finding a solution is certainly worth the effort, given that the cause is simple: the social stress due to high stocking density. Our density stress models (Table 1& 2) indicate that the observed chickens, as of week 4, demonstrate a high stress level through reducing their preening activity. This cleaning behaviour is an indicator that chickens have adjusted to their environment, and a reduction in the amount of time spent on this activity reveals the level of stress. Birds restore preening activity to an acceptable level with

the sensory additive added to their diet, indicating a reduction in perceived density stress. In this context, well-being is considered to be an early performance indicator. In fact, the performance drop in high-density farming observed at the end of the production cycle corresponds quite closely to the reduction in preening activity. Thanks to VeO, animals return to natural activity, which results in better performance (Table 2).

Table 1: High stocking density increases stress perception

Density (birds/m²)	Treatment	Standing (min/h)	Preening activity (n/b/h)	Pecking (n/b/h)
14	Control	34.7ab	19.2a	2.8
	VeO	27.0bc	17.8a	1.0
22	Control	20.7c	4.0b	0.5
	VeO	39.7a	12.3ab	1.0
SEM		2.24	2.22	0.43
p		0.01	0.05	0.19

a, b, c p< 0.05

Table 2: High stocking density decreases individual performance

Density (birds/m²)	Treatment	Body Weight (g)	Feed Intake (g)	FCR
14	Ctrl	2092.0a	3308.2a	1.62a
	VeO	2094.20a	3288.8a	1.60a
22	Ctrl	1947.4c	3027.2 b	1.59ab
	VeO	1998.3b	3071.6ab	1.57 b
SEM		16.36	32.13	0.006
p		<0.0001	<0.0001	0.04

a, b, c p< 0.05