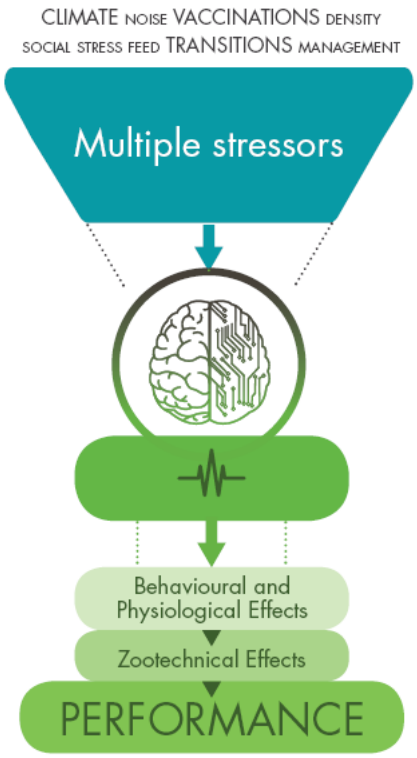
# Stress management expertise in relation to modern animal farming

**Guillaume Desrousseaux, Msc, Agr.**
Market manager Animal Care Laboratoires PHODE, France

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.

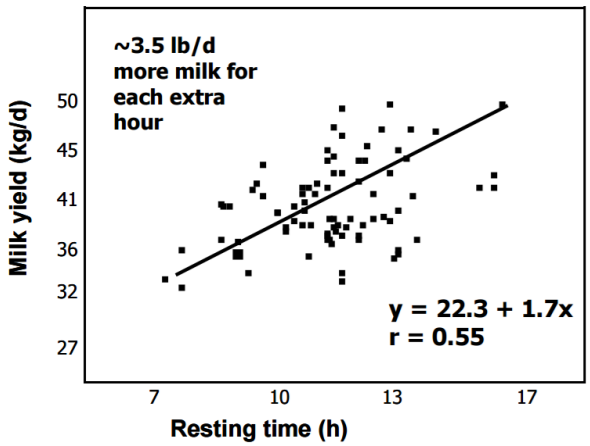



## Natural behaviour of the dairy cow and its productivity

Preserving the natural behaviour of cows in stalls protects the well-being of the animals and boosts the dairy farm's productivity. According to Grant and Albright (2000), a dairy cow's activity can be broken down as follows: 12 to 14 hours/day of sleeping/resting; 7 to 10 hours/day of rumination; 3 to 5 hours/day of feeding; 2 to 3 hours/day of socialisation; 0.5 hours/day of watering, and 2.5 to 3.5 hours/day of milking and walking. A direct correlation exists between a dairy cow's rest time and its productivity (Figure 1). Grant et al. (2004) admit that every additional resting hour is converted into 0.9 to 1.6 litres of milk.

**Figure 1**. Relationship between resting time and milk yield (from Grant, 2004)

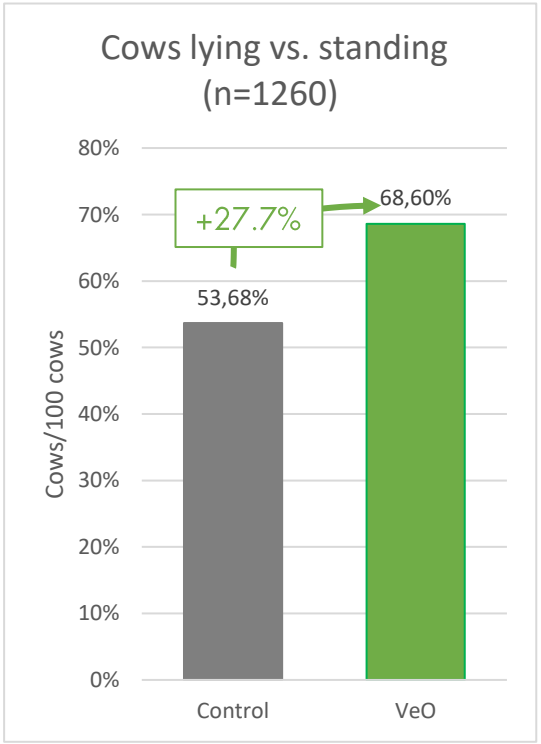
Perpetual modifications of social relationships within the herd and high density negatively impact resting time. Furthermore, the dairy cow will seek this rest time itself, even if it means cutting down feed time (Metz, 1985; Batchelder, 2000; Hill et al., 2007). Milk production is penalised *de facto* by a reduction in the dry matter ingested every day, as well as by excessive quantities ingested at less frequent feeding times. Blood flow in the udder and rumination efficiency decrease as lameness risk increases.




## Modulating brain perception of stress to manage behaviour of dairy cows

Various academic and field studies have demonstrated that feeding and general behaviours of dairy cows change with Phodé's aromatic blend in their total mixed ration. First feed intake is more homogeneous and less aggressiveness while feeding is observed especially when stocking density is high. Secondly, from field trials in Mexico, we measured that the number of daily footsteps drops significantly by 38%. In a study at Davis University, we also measured that animals' lying time exceeds 28% (Figure 2). Thus, selected and purified aromatic compounds are able to make dairy cows rest more and ruminate better with consequences on milk production and feed efficiency improved by 7%.

**Figure 2.** Time spent lying down in dairy cows fed Phodé's solution (Phodé, Davis University)




*References available on request*