NEWS TO USE

EXTRA SUPPLY OF VITAMIN E MIGHT REDUCE MORTALITY IN PMWS AFFECTED HERDS[1]

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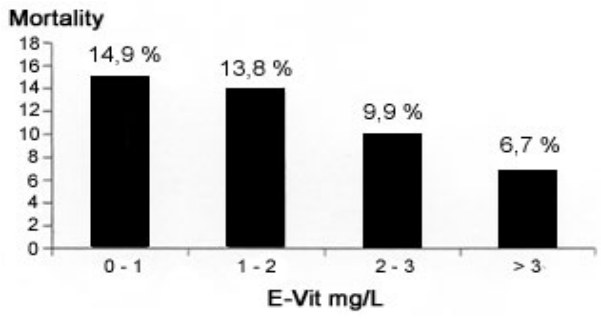
Postweaning Multisystemic Wasting Syndrome (PMWS) has been recognized in swine herds all over the world with the first cases reported in Denmark in 2000. As of May 2004 more than 400 herds are affected in Denmark. One very central question for practitioners working in the field is how to control the disease and how to reduce the losses due to PMWS. Thus the pig producer's organization in Denmark, The National Committee for Pig Production, has initiated several studies on various aspects of PMWS. One of these studies is on the significance of vitamin E.

The question: PMWS and vitamin E

Porcine Circo Virus type 2 (PCV2) plays a significant and central role in development of PMWS, but it is generally accepted that other factors must contribute for PMWS to develop.
Vitamin E (alpha-tocopherol) is important for the normal function of the immune system. Vitamin E acts as an antioxidant and protects cell membranes. The frequently recognized drop in blood vitamin E post-weaning is ascribed to a limited absorption capacity for this essential nutrient by the piglet. At the same time it is demonstrated that the immune system in fatal cases of PMWS is severely compromised.
Thus a study was performed to investigate, if there is any relation between low levels of vitamin E in the blood around weaning and postweaning mortality in PMWS affected herds.

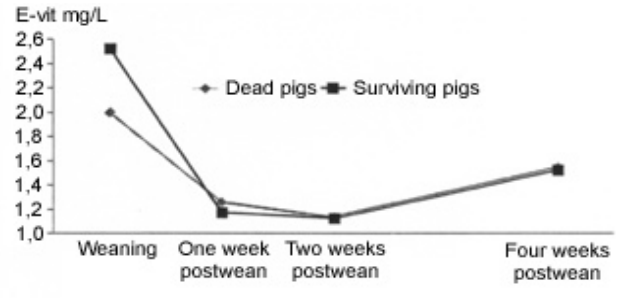
The answer

Extra supply of vitamin E to suckling piglets might be one way to reduce the losses due to PMWS in the weaner facility. The best way to ensure a higher level of vitamin E in piglets preweaning is by increasing the level in the feed of the lactating sows. As an alter-native, injections of the piglet with vitamin E might be used.
Analyzing the vitamin E levels in the blood of pigs at weaning in 3 affected herds showed a trend (P=0.08) of increasing mortality postweaning with decreasing levels of vitamin E:



The study showed only a marginal significant difference in the drop in vitamin E postweaning between pigs dying and pigs surviving the PMWS critical postweaning period in any of the three herds (P=0.07):

Mean level of vitamin E in the blood of pigs dying in the nursery and of pigs surviving



For further details see abstract (VITAMIN E AND POSTWEANING MORTALITY IN PMWS AFFECTED HERDS by P. Baekbo[1], A-G Hassing[1], P. Olsen[1], B. Lorenzen[1], H. Wachmann[1] , C. Lauridsen[2], [1]The National Committee for Pig Production, DANISH BACON & MEAT COUNCIL, [2]Danish Institute of Agricultural Science, Foulum).

Conclusion

The study implies that low levels of vitamin E in serum at weaning poses a risk of dying postweaning in herds affected with PMWS. The effect of extra supply of vitamin E to suckling piglets on the post weaning mortality needs further investigations.

[1]Proceedings of the 18th IPVS Congress, Hamburg, Germany, 2004 - Volume 2, p. 861

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