The Effects of Postweaning Multi-Systemic Wasting Syndrome

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A disease that has no affect on human health through pork consumption definitely has a major impact on almost every aspect of pork production. Symptoms of post-weaning multi-systemic wasting syndrome, or PMWS, are wide in variety and leave most scientists almost completely boggled. Even though a few treatments experimented with prove helpful, they are sometimes unexplainable. Initially PMWS was discovered in Europe, but was more recently found in Canada and the United States. The economic devastation that this disease may cause mimics that of previously endangering viruses such as porcine reproductive and respiratory syndrome, porcine dermatitis and nephropathy syndrome, swine influenza, and porcine circovirus. In fact, several of these diseases actually work together in the occurrence of PMWS.

In order for postweaning multi-systemic wasting syndrome to occur, circovirus must be present, and in most cases porcine circovirus type-2 is the root cause of PMWS. Next, PCV-2 must be associated with lym phoid depletion lesions and a secondary disease such as PRRS, swine influenza, or mycoplasmal pneumonia. It is also not uncommon to see PDNS occur with the affects of PMWS. This usually causes skin lesions which are associated with kidney complications. There have actually been small studies on the influence of PCV-2 on Durocs, Landraces, and Large White genetics to compare breed susceptibility. After being inoculated at five to seven weeks of age, only Landrace pigs developed PMWS and lesions. Once PMWS has set in, symptoms most commonly occur between twelve and fourteen weeks of age in the early growing and finishing stages. Symptoms of PMWS include increased respiratory rate, jaundice, and failure to thrive. The animals' failure to thrive is related to its dehydration and decreased growth rate due to its lack of food and water intake. In an af fected herd usually between ten and twenty percent of the herd show clinical signs. Of those hogs affected with PMWS there is nearly a seventy or eighty percent mortality rate.

In order to prevent such a devastating loss within a single herd, there are a few practices of herd management that should be taken into consideration. First, producers should attempt to isolate any affected pigs either in hospital pens or an entirely different building to stop the spreading of the disease. Next, groups of hogs should be restricted to an all-in all-out flow, which cuts down on excessive mixing or moving of any hogs not yet showing clinical symptoms of PMWS. Another method of prevention used by producers is

buying all hogs from a single source that has no history of being affected by PMWS. This decreases the chances of catching the disease and suffering devastating losses. In the occurrence of PMWS, there are possible treatments that have proven helpful. To begin with, the disease must be properly diagnosed as PMWS. This can be done by examining a necropsy and finding key characteristics such as lung lesions. After the diagnosis is correct, the "trigger diseases" must be identified and treated also. It is crucial the vaccine timing is correct in order to properly protect a herd from different viruses. Recently, a vaccine called Circovac was developed in Canada. This vaccination is administered to sows, which then pass protection from circovirus onto their offspring. This is especially helpful since circovirus is the root cause for the development of PMWS. The next step is to help the affected pigs be as comfortable as possible. This includes having the proper pig density per pen, ventilation, reducing mixing and moving of pigs, and having food and water readily available. All of these help to reduce stress.

As research continues and more hogs are examined, researchers will become more familiar with postweaning multi-systemic wasting syndrome. They will understand the affects it has and how to treat the disease. As an international affair vaccinations are being developed and tested with full support allowing producers, on all levels of production, to think brighter towards the future.