Journal of Animal and Veterinary Advances 11 (5): 595-596, 2012
ISSN: 1680-5593
© Medwell Journals, 2012

Analyzing on Characterizing and Difficulties of Control and Prevention Epidemiology of the 2006-2010 Swine Infectious Diseases in China

[1]Li-Zhi Fu, [1]Su-Hui Zhang, [1,2]Zuo-Hua Liu, [1]Liu Yang and [1,2]Jin-Long Yang
[1]Chongqing Academy of Animal Science, [2]Key Laboratory of Pig Science,
Ministry of Agriculture, 402460 Chongqing, China

Abstract: The characteristics causes difficulties of control and prevention were analyzed based on the summation of the swine infectious diseases of 2006-2010 appeared in China. Results showed that the outbreaks were correlated with some characteristics such as spreading quickly, more and more diseases of suppression of the immune response, quite commonly on mixed infection and so on. Finally the control strategies were put forward: actively developing the integrated control measures, biosafety first and precaution crucial and so on.

Key words: Swine infectious diseases, characteristics of the outbreak, causes of the outbreak, control strategies, immune reponse, China

INTRODUCTION

The pig industry is evolving at a rapid pace in China recently years. It is characterised by increased levels of scale, quantity and intensity (Liu, 2010). At the same time, pig epidemic also has changed enormously. This knowledge becomes even more acute when considering the current operating pig industry in China. The aim of the current study was to analyze the characteristics and causes based on the summation of the swine infectious diseases of 2006-2010 appeared in China.

CHARACTERISTICS AND DIFFICULTIES OF CONTROL AND PREVENTION OF EPIDEMIOLOGY IN PIG FARMS

Spreading quickly: Infectious disease has great epidemic potential in large pig farms. The liquidity was increases greatly with pigs come from different origin and different age accompany with increases in the epidemic horizontal transmission that the spread speed up (Li, 2009).

More and more diseases of suppression of the immune response: Many of the immunosuppressive diseases such as porcine reproductive and respiratory syndrome, porcine circovirus disease, swine flu, swine enzootic pneumonia, these diseases due to immunosuppression caused by the low immunity, lead to increase susceptibility and vaccine failure with the conditional pathogenic bacteria and conditional pathogenic virus. Immunosuppressive diseases not only increase morbidity and mortality and as a result of immunosuppression caused by a series of secondary infection or co-infection which bring bigger loss (Li, 2009).

Commonly on mixed infection: Mixed infection was occupy a large proportion in the epidemic process when diagnosed by clinical and laboratory test. It has occurred from time to time in the same case which isolated two or more pathogens. Such as swine fever and pseudorabies, porcine reproductive and respiratory syndrome, classical swine fever and parvovirus and porcine circovirus virus disease, classical swine fever and colibacillosis and salmonellosis, swine enzootic pneumonia and infectious pleuropneumonia, porcine contagious pleuropneumonia and swine eperythrozoonosis mixed infection. It has become a serious social problem with avian influenza and swine influenza (Liu, 2010; Li, 2009).

More and more new diseases: The classical disease was continue to exist such as classical swine fever, transmissible gastroenteritis, porcine pseudorabies and swine infectious atrophic rhinitis while it was increased the introduction disease such as Porcine Reproductive and Respiratory Syndrome (PRRS), Postweaning Multisystemic Wasting Syndrome (PM-WS), contagious Porcine Pleuropneumonia (APP), Eperythrozoonosis of swine flu (EPE), porcine respiratory syndrome and other new disease which appeared in succession (Qiu, 2009).

Morbidity and mortality increasingly higher and higher: The total mortality rate of porcine approximately 10.12% (viruses infection was 25% approximately, bacteria

Corresponding Author: Jin-Long Yang, Chongqing Academy of Animal Science, Ministry of Agriculture, 402460 Chongqing, China

infection was 60% approximately, other was 15%), abortion and still birth was about 2%. Porcine reproductive and respiratory syndrome virus, porcine parvovirus, Japanese B encephalitis virus, pseudorabies which lead to mortality about 4% on newborn piglets. Porcine reproductive and respiratory syndrome, piglet diarrhea which lead to mortality about 3% on weaned piglet. Porcine reproductive and respiratory syndrome virus disease, porcine circovirus virus disease which was lead to mortality about 0.5% on fattening pigs (Qiu, 2009).

CONTROL STRATEGIES OF SWINE INFECTIOUS DISEASES

Actively developing the integrated control measures: It was include with strengthen management, improve the level of animal nutrition and reduce animal stress factors. Avoid feeding moldy or toxic feed, improving air quality, keeping dry ground.

Biosafety first and precaution crucial: The precaution measures of decrease infection disease is biosafety. Biosafety is to ensure the safety and health of swine and other animals. It is economically and effective means for disease control. Animal epidemic prevention program is an important part of the biosafety. Biosafety system is a comprehensive control project which should be build on two aspects from space and time and it should be emphasized to all aspects of the production links including the role of dynamic monitoring and feedback (Liu, 2010; Li, 2009; Qiu, 2009).

Regulate immune and monitoring: The aims of epidemic prevention was to enhance resistance and specific antibody levels, prevent and reduce disease incidence. The farms should be in accordance with the immune vaccination program especially with viral vaccine (Wang, 2009; Qiu, 2009; Liu, 2010). It must be emphasized that immunity is necessary before antibody detection in every farm. It should be monitoring of swine antibody levels and antibody titers with different periods. Avoiding blindly immunity or immune failure or immune disorder is the basis of immune program developed (Liu, 2010).

CONCLUSION

This study shows that to prevent and control pig disease was required high level on biosafety with rapid development of pig industry in China. It is significant to guarantee product safety with science and technology of biosafety.

ACKNOWLEDGEMENTS

This research was supported by the National key Technology Research and Development Program of the Ministry of Science and Technology of China (Grant No. 2010BAD4B01-8), making technology roadmap of swine industry in Chongqing-subprojects of soft science fund of science and technology Committee of Chongqing-study on technology roadmap of agriculture industry in Chongqing; special fund for the industrial technology system construction of modem agriculture.

REFERENCES

Li, F.J., 2009. Review last year and make a forecast next year on swine disease in China. Jinri Xumu Shouyi, 3: 4-6.

Liu, M.Y., 2010. Simple analyze on biosafety of intensive pig farm. Guangdong J. Anim. Vet. Sci., 35: 25-28.

Qiu, Y.M., 2009. New trend of precaution against on swine disease in China. Pigs Poult., 29: 60-62.

Wang, Q., 2009. Current situation and control countermeasures of swine diseases in China. J. Anhui Agric. Sci., 37: 18281-18383.