

5 years 5 steps and 5 lessons learned on PRRS control in Thai swine farms



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INTRODUCTION

To achieve improved swine production performances, control of PRRS, PCV2, Mhyo and other endemic diseases are needed (especially) in Western farms in Thailand. PRRS control is much more than just vaccination alone. A comprehensive understanding of the disease and the production system are required. Management and biosecurity should be approached systematically, understanding the constraints of the systems¹. In the past 2 years, the Thai swine farm have had other disease challenges after being able to control PRRS. The FMD and PED virus were recurrent in the western area of Thailand and caused devastating health impact in pigs of all ages. The objective of this study was to demonstrate the benefit of using of the 5-step approach (Boehringer Ingelheim) to defined solutions for control of PRRSv and other diseases challenges in a 3,500 sows level farm.

MATERIALS AND METHODS

The 3,500 sows head, farrow to finish farm is located in the western part of Thailand. The herd has applied a VR2332 based vaccine to be a part of the PRRSv control strategy since 2012. Parity segregation was applied before PRRS vaccine was implemented. The vaccination program consisted of Ingelvac® PRRS MLV sow mass vaccination quarterly and piglets vaccination at 2 weeks of age and double vaccination of replacement gilts 30 days apart. From March-April 2016, there was a PED outbreak in the farm which raised the preweaning mortality up to 84.6% in the young parity sow unit and to 33.7% in older sows unit (figure 1). The interventions at that time were 1) Euthanasia of affected piglets 2) PED Feedback was done to every sow except sows in the farrowing house 3) Off-site farrowing sows for a month and 4) Testing of incoming gilts by PCR before entering to young sow unit. 3 months later, July 2016, a farm broke with FMD affecting pigs of all ages. The FMD break had a huge impact on both reproductive performances and general health condition in nursery - finishing pigs. Mummified piglets raised to 35% in young sows and 5.7% in elder sows (figure 2). Mass vaccination with FMD kv vaccine was decided in Jul together with supportive treatment. By September 2016 there were abortion problems in the young sows unit. Monitoring PRRS status was considered to define the cause of problems.

Figure 1: Pre weaning mortality in young sows from Jan –Dec 2016.

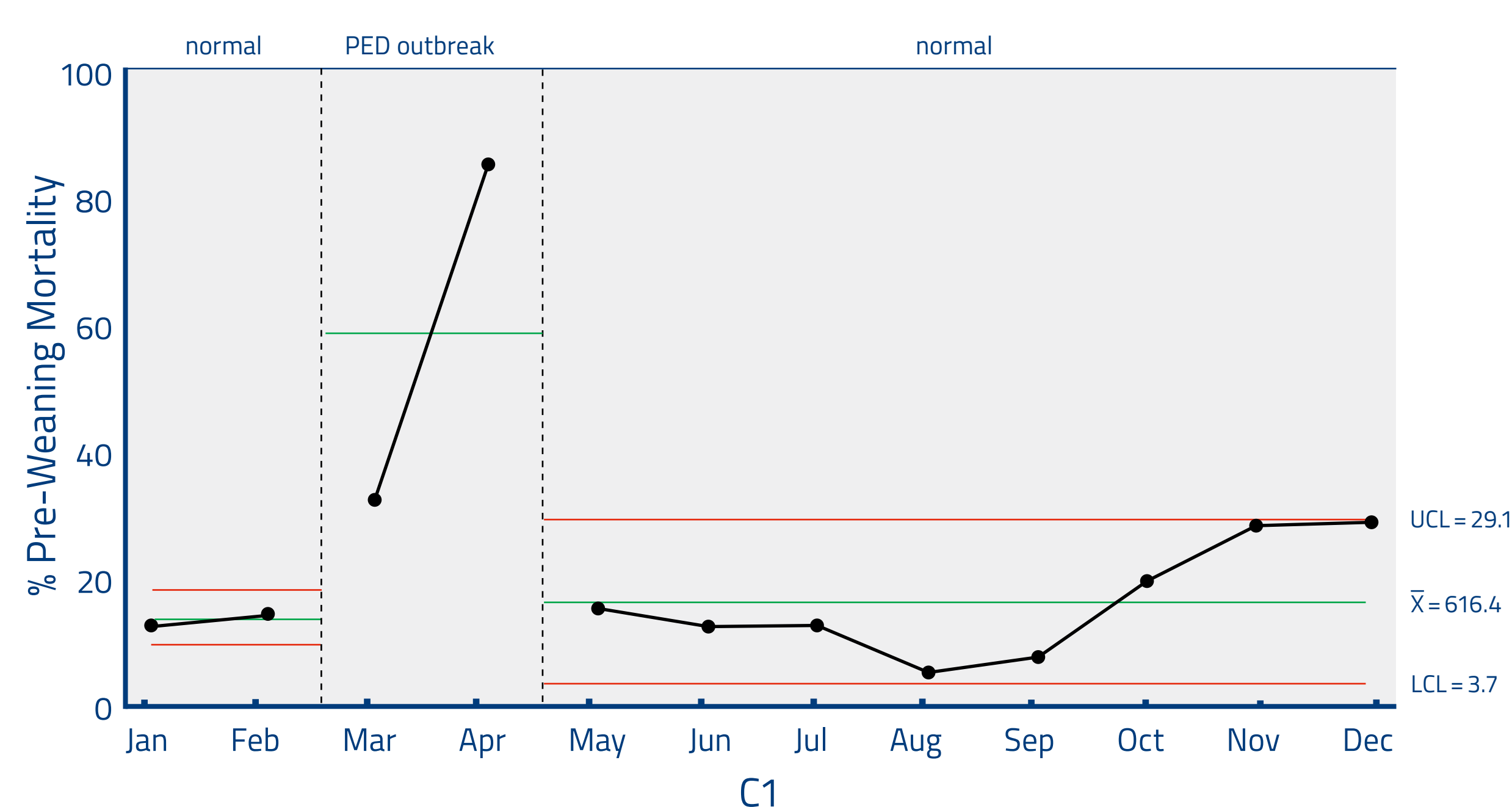
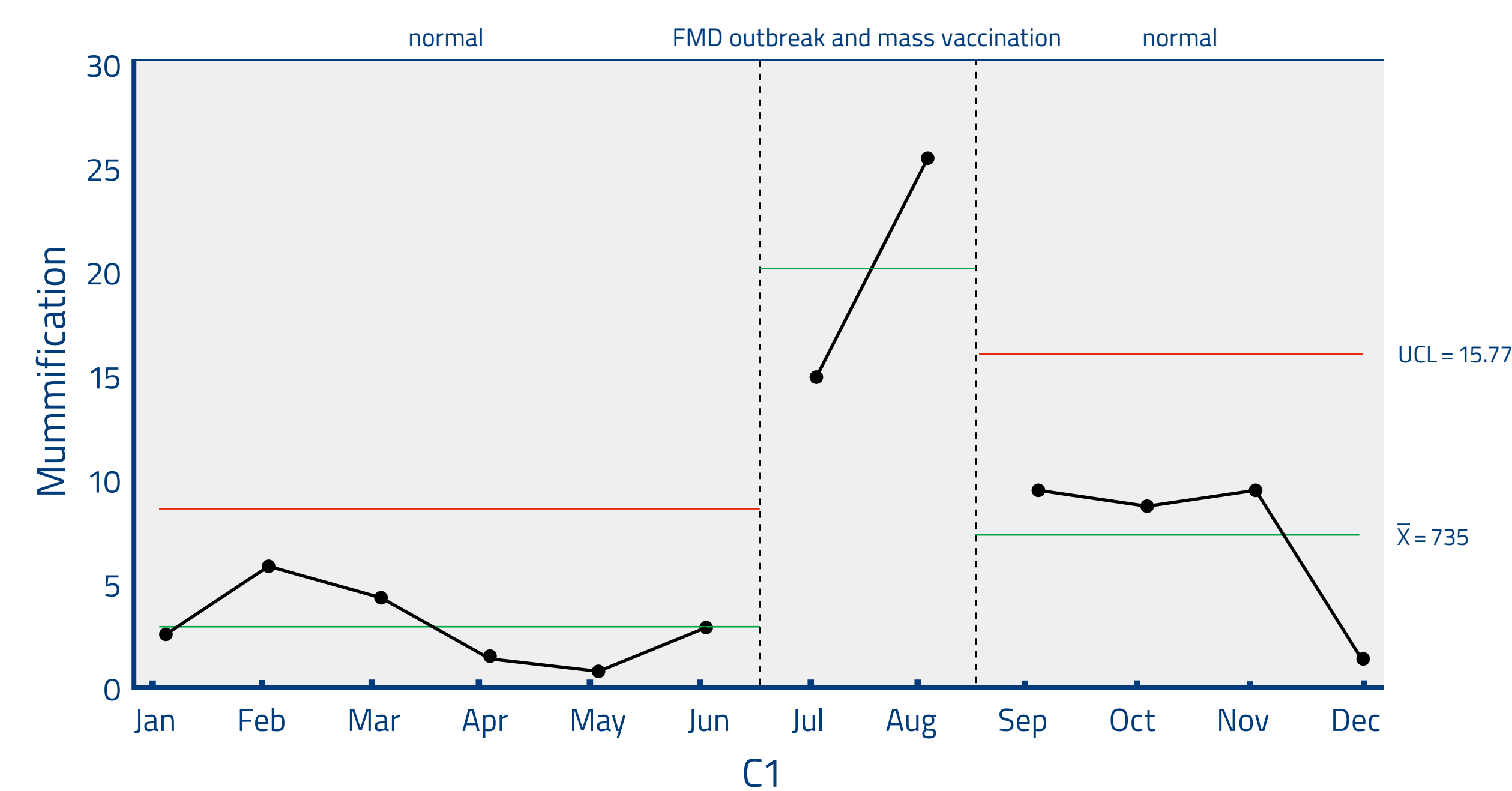


Figure 2: Percentage of Mummified in young sows from Jan-Dec 2016.



RESULTS

To define the PRRS status, 60 blood samples were collected from piglets and sows of both units and tested by PCR. The lab results showed positive results in piglets pigs from the young sow unit and the elder sow unit. Sow mass vaccination and piglets vaccination by PRRS MLV was implemented to control the PRRS unstable herd by October 2016. Dec 2016, the monitoring plan revealed that PRRSV positive piglets still remained in young and old sows unit (30 samples from each unit) as well as in nursery, with low clinical respiratory illness pigs. There are 6 of 12 positive samples from piglets and 8 of 12 samples from nursery samples and all 6 samples positive from finishing pigs by the PCR. To minimize the viral load, partial depopulation and partial offsite grower pigs were initiated. PRRS monitoring of piglets are still ongoing every month and 4 months consecutively.

DISCUSSION AND CONCLUSION

PRRS, PED and FMD have been representing an important threat for Thai swine farms. These three pathogens are still very educating diseases. The problems showed us how weak the application of our biosecurity rules was in pig density area. To maintain the pig performance, controlling disease by vaccination associated with improve of biosecurity, pig flow management and proper diagnosis monitoring are needed. These farms are still ongoing follow up the intervention solutions option and determine possibility of successful. There are 5 lessons to learn from this case:

1. Facing many co-infections, it is required to immunize against all the relevant disease pathogens.
2. Vaccination is not the only way to control disease. It also requires management improvement and pig flow management as well.
3. External-internal biosecurity and segregated parity housing helped to minimize the PED problem and other diseases in new coming sows.
4. Diagnosis is a useful tool to determine PRRSv status and the status of other viruses which is important to determine current status.
5. The combination of biosecurity, diagnostics, management and implementation of the right vaccination program helped to achieve an improved pig production

REFERENCES

1. Miyashita and Hamaji (2009). Proc of the 4th APVS Congress. P. 264

