

Maintaining health rather than treating disease

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Introduction

A comparison between two treatment philosophies was carried out on a farrow to finish 2700 sow system. The farm had a history of post-weaning respiratory problems with spikes of mortality associated with Enzootic pneumonia and Actinobacillus pleuropneumonia of 7%.

1. Standard Veterinary Care

Based on previous clinical evidence the farm was provided with a prophylactic medication and vaccine programme.

2. Health Maintenance

Based on a review of the pig flow, environment and management of the pigs with minimal prophylactic medication and vaccine programme. Use of statistical process control to determine health progress.

Herd Health Specifics

The farm's health status:

<i>Mycoplasma hyopneumoniae</i>	Positive	PRRSv	Negative
APP (1 and 15)	Positive	SIV	Negative
Progressive AR	Negative	PMWS	Negative
<i>Brachyspira hyodysenteriae</i>	Negative	Aujeszky's Disease	Negative

Treatment routines

Similarities

Both concepts adopted *Mycoplasma hyopneumoniae* vaccination at weaning.

Amoxicillin at weaning via water medication for 4 days at 20 mg/kg bodyweight.

Differences

Standard veterinary care

Parvovirus vaccination to gilts pre-service and sows at weaning

APP vaccine at 12 weeks and 16 weeks of age

Amoxicillin and tilmicosin via water medication (both at 20mg/kg bodyweight) for 4 days at weaning and one week later.

Health maintenance

Parvovirus vaccination to gilts pre-service only

APP vaccine not used

No tilmicosin water medication used

Amoxicillin used at weaning for 4 days only.

Chlortetracycline in-feed 400g/t for 14 days post-weaning.

Review of the ventilation system on the farm – use of automatic controllers

Adoption of a pig flow model around 115 sows a week to farrow – 1100 pigs to wean (9.6 per sow).

Results

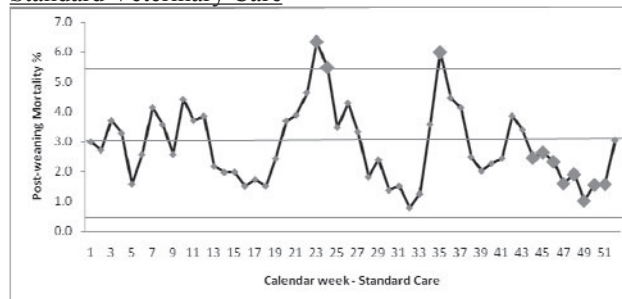
Health maintenance was employed over 2007 and compared with results from 2006.

The SPC model utilized was:

- points above the upper critical control point = 2 s.d.
- 8 consecutive points on one side of the mean
- 3 out of 4 points on one side of the central line (=1 s.d)

Mortality

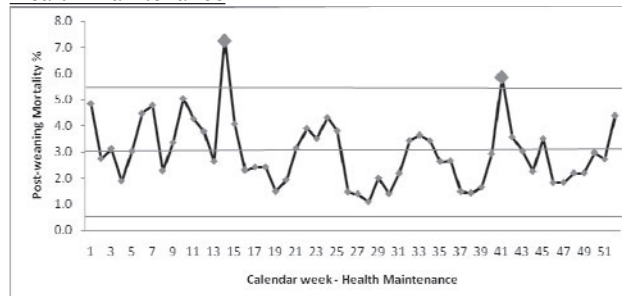
Standard Veterinary Care



Stats: Mean 2.9% s.d 1.3 Upper Critical Point 5.5

Large markers indicate periods when system out of control

Health Maintenance



Stats: Mean 3.0% s.d 1.3 Upper Critical Point 5.6

There was no statistical difference $p = 0.52$

Costs in 1000 Au\$

	Standard Care	Health Maintenance
Vaccines	190	101
In-feed	0	20
In-water	120	8
Extra repairs	0	30
Totals	317	159
Difference		158
per pig sold - 58,000 pigs per year =		\$2.70

Discussion

Veterinarians can make substantial reductions in the cost of production by encouraging their clients to adopt a health maintenance programme. The programme does necessitate that the veterinary advisor examines the whole farm rather than selected populations "at risk".

The keys are: Ensuring biosecurity standards are set and met. Pig flow targets are achieved on a batch programme.

The environment is ideal for production and where the environment is suboptimal the veterinarian identifies these areas accurately and offers reasonable ameliorations.

The use of statistical process control can assist to identify times when the system is out of control and additional treatment measures are required.

Note in both scenarios the system was "in control" a majority of the time. Variations around the mean (both up and down) occur in any production system.

The health maintenance approach can reduce costs while allowing the veterinarian more input into the system.