



Shaping the future

PFIZER SATELLITE SYMPOSIUM

In its Satellite Symposium at the 21st IPVS Congress in Vancouver Pfizer focused on the prudent use of antibiotics.

First to speak was Scott Hurd from Iowa State University in the USA. In his presentation he posed and tested the hypothesis that the full utilisation of antimicrobials is a veterinarian's ethical responsibility. He advocated that if the five 'IF' statements in Table 1 hold true then the 'THEN' statements become action items for the veterinary profession.

Minimal risks

As far as the first IF point is concerned Scott highlighted that all but one of the published risk assessments have demonstrated risks of less than one in a million that someone in the USA will experience adverse treatment outcomes due to a resistant infection which originated from the on farm use of antibiotics.

As far as the second IF point was concerned he cited OIE who said in 2004 – 'Controlling zoonotic agents

Table 1. The hypothesis.

IF
<ul style="list-style-type: none"> ● There is a minimal public health risk from antibiotic use. ● Healthy animals make safe food. ● The world will need increasing amounts of pork. ● Antimicrobials improve the efficiency of production. ● The government and consumers do NOT always know what is best for the 'common good'.
THEN
<ul style="list-style-type: none"> ● We must fight for risk based decision making. ● We must address the 'systems approach' to address risk concerns. ● We must keep our antibiotics usage in perfect order.

There needs to be:

- Evidence of effectiveness.
- Evidence that a preventive use of an antibiotic is consistent with accepted veterinary practise.
- Evidence that use is linked to a specific targeted aetiological agent.
- Evidence that use is appropriately targeted.
- Evidence that no reasonable alternatives for intervention exist.

Table 2. US FDA general principles for defining veterinary oversight.

in animal and poultry reservoirs has the effect of reducing the challenge to food safety management systems in processing and further along the food chain. Producing and maintaining healthy stock requires good husbandry practices, which includes good stock selection and veterinary attention'.

With regards to the fourth IF point production it is of concern that efficiency benefits no longer seem important to US and European regulators. The US FDA has actually said that they are not allowed to consider benefits!

Scott reported on a summary of 67 field trials that indicated that the use of antibiotics reduced mortality by a half in young pigs (2.0 vs. 4.3%) and that this reduction was even greater under 'high disease and stress conditions' (3.1 vs. 15.6%).

Studies have also shown how antibiotic usage improves growth rates and so 'the use of feed based antimicrobials has consistently been shown to benefit livestock production, increasing the ability of farms to maintain profitable margins'.

As far as the fifth IF point is concerned fads come and go but in a food context fads tend to become preferences. The danger then is that preferences become regulations and those of us charged with the production of safe, cost effective food must then get involved.

Veterinary oversight

As far as the THEN scenario the US FDA now considers the use of antibiotics to promote growth as an injudicious use of these important drugs.

In 2010 keeping our house in perfect order includes a number of

practices such as veterinary oversight, judicious use and great record keeping. Scott felt that it was likely that veterinary oversight in the USA would need to increase and that FDA has given general principles for defining this (see Table 2).

Pfizer's Dom McDermid considered just what the guidelines for the prudent use of antibiotics are and what they mean.

The key issues highlighted were that the use antibiotics should be minimised, if use is necessary choose the right drug, use of the appropriate drug properly at the right dosage and for the correct duration of treatment and an antibiotic should only be given to animals that need it.

He highlighted an interesting anomaly – why is it that a three day course of injectable antibiotic is considered adequate for a farm animal, when 10-14 days is considered to be needed for man or companion animals!

IPC initiative

In rounding off the session on antibiotics Alan B. Scheidt from Pfizer reviewed his company's Individual Pig Care (IPC) initiative, which has been designed to help pig farmers improve the health of their pigs, improve the profitability of their business and improve public perception of our industry.

IPC means accepting responsibility for the individual care of every pig every day and has as an integral part of it the prudent use of antibiotics. IPC is not a substitute for effective disease control measures at herd level!

The key components of IPC are detailed in Table 3. The 'ABC and E'

system has been developed by Pfizer for sick pig identification.

An 'A' pig typically looks like a healthy pig until further investigated. It is usually well fleshed and may or may not look gaunt and may or may not have a rough coat.

It is usually depressed, has listless ears and watery eyes are often present.

A 'B' pig has definite gauntness, is starting to lose flesh/weight and commonly has rough hair. It often has a soiled coat from lying down, has a dark exudate around the eyes and listless ears.

A 'C' pig, on the other hand, is noticeably thin with the spine typically showing and is severely depressed. An 'E' pig is one that should be euthanised.

The goal of IPC is to recognise 'A' and 'B' pigs and treat them so that they do not become 'C' pigs. IPC is linked to targeted individual medication using a long acting parenteral antibiotic such as Draxxin (tulathromycin) or Excede (cetiofur crystalline free acid-CCFA).

Alan concluded by giving an example of a farm producing 5,000 pigs a year.

By using IPC and decreasing mortality by 1.0% the farmer obtained another \$US4,250 of income which became \$4,750 when medicine cost savings were added in. ■

Table 3. The key components of IPC.

- Daily inspection of all pigs.
- Identification of sick pigs in both the nursery and in finishing and classifying them as A, B, C or E.
- Treating sick pigs early while still at the A or B level in order to maximise treatment success.
- Not treating and euthanising early pigs that are unlikely to recover (E).
- Using effective, individual animal antibiotic treatments that ensure full administration of an appropriate dose for an appropriate period of time.