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Life Without Antibiotics

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“Life without antibiotics” scream the headlines! This has led to cries of antibiotic free produce, which is total nonsense. One of the problems is the demonising of antibiotics when in fact they have done nothing but good; it is the abuse, not the use, which has been the problem.

It is oxymoronic to scream gloom and doom for a life without antibiotics then, almost in the same breath, proselytize upon the benefits of food that has never been ‘tainted’ by antibiotics.

But when has common sense been part of the debate?



Antibiotics are not bad, in fact they are exceptionally good. However, at the end of the day, they are merely a tool, just as vaccination and infection control, among other mechanisms, are tools in the fight for life.

The back to the future concept of life without antibiotics may seem

freaky but is just one of many alarmist resonations coming from the endless talkfests on the issue.

Decisive action now, and common sense in debates should ensure the continued use of this valuable tool. This is the subject of the main article inside.

Special points of interest:

- * A look at the dairy price fall out
- * Infection control in veterinary clinics
- * The BIG issue—NZVA and the ARM statement

& Pastoral Farming

The big drop in dairy prices has led to another back to the future situation with a call for a return to the pastoral farming that made our dairy so competitive on the world market.

This is eminently more sensible and much less knee jerk than the calls for antibiotic free produce.

The global dairy price is thus the basis for another article on page 2.



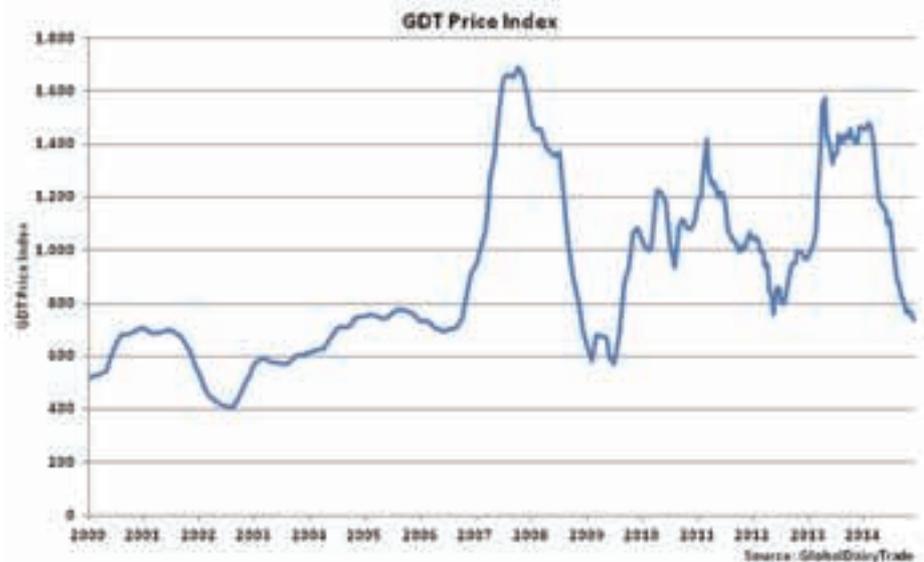
Chickens Come Home To Roost

Bad news sells, and hasn't the media had a field day recently at the expense of the dairy industry? Despite the doom and gloom there are certain interesting viewpoints from the whole exercise. Although the industry is dairy, chickens could be involved from the perspective of coming home to roost. In other words, could this be a correction that needed to happen?

When we look at the graph of the global dairy price we can see that the current slump matches that of 2009, when the whole world, including New Zealand, was in recession. There was also a dip in 2012. Why then should this dip be any worse economically than those, especially that of 2009 when farmers were much more overloaded with debt? What about prior to 2009 when the highs then are now the current troughs?

Those old enough to remember lectures from Harry Pearce will recall his often referring to "advisory officer disease";

The simplistic answer is that cost of production is much higher today but whose fault is that? The very high pay-outs of 2013-14, which



informed commenters believed were not sustainable, led to a mad scramble to produce more and more milk. Supplements and feed out pads led to the virtual buying of production and, worse still, meant that our farmers were competing, not on our terms, but on the same terms as the opposition, a battle we were never going to win.

Those old enough to remember lectures from Harry Pearce will recall his often referring to "advisory officer disease"; this is a clear case of that syndrome.

The myth of cheaper NZ production had long since been dispelled.

Now the call is to reduce cow numbers and get back to what we are good at, sustainable pasture based farming. The high cull cow price at the moment makes this quite feasible.

Reduced production and the falling dollar should mean, as long as the GDP has bottomed out, that things will slowly improve over the next year.

We all hope so, as practitioners and pharmaceutical companies are just as dependent on the farmers' livelihood as are the rest of the rural communities. Just stick to your knitting cockies!

The Newborn

One night a woman with a newborn baby spotted her husband standing over their baby's cot. She watched him silently and unobtrusively, with curiosity.

As he stood there, looking down at the sleeping infant, she saw on his face a mixture of emotions; disbelief, amazement, enchantment, scepticism, and intense study.

Touched by this display and the deep emotions he was showing, she moved into the baby's room and slipped her arm around her husband. "A penny for your thoughts", she whispered.

"It's utterly amazing, and beyond all understanding", he said. "It's got me stuffed how anyone could build a cot like this for \$49!!"



Disinfection Protocols

With the current huge focus on antimicrobial resistance infection control in veterinary medicine has become a very important issue, in both large and small animal practice. Not only Best Practice audited clinics but virtually all clinics will need to have guidelines and firm protocols in place and many habits need to change.

It should not be a massive paradigm shift, just a return to the teachings at University. Back in the author's day the head of small animal surgery was a little Englishman called Dave Lawler who insisted on no antibiotics being used in student surgeries. He

the *de rigueur* technique really amounted to a splash of Savlon plus massive doses of penicillin/streptomycin combinations.

maintained that surgery was done in aseptic conditions and, if antibiotics were later needed, there must have been a breakdown in technique.

Once out in practice all thoughts of aseptic technique went out the window, especially in large animal surgery and antibiotic cover was considered essential. How effective it actually was is anyone's guess, as the *de rigueur* technique really

Manyana

Tony was expounding his knowledge of the Spanish language to Nagy. He used the word "manyana" (pronounced "man - yana"). Nagy asked him to explain what it meant.

He said that the term means: "Maybe the job will be done tomorrow; Maybe the next day; Maybe



amounted to a splash of Savlon (a mix of chlorhexidine and cetrimide) plus massive doses of penicillin/streptomycin combinations. It is fair to say more modern antimicrobial therapy is a lot more sophisticated and effective but losing cases due to surgical infection did not seem to be an issue.

As with a lot of veterinary science old standards are no longer acceptable, and hygiene is at the top of the agenda. One of the problems however is that disinfectants are not regulated in NZ and there are many spurious claims and counter claims in the marketing world.

To overcome this, EA, a few years ago, produced a disinfection manual aimed at veterinary practices to

give informed disinfection guidelines.

Now we have available disinfectant protocols (plural because differing situations in clinics require different protocols).

From waiting room to consult room to surgery, and different levels of hand washing as well, there is a simple protocol available outlining both technique and the specific type of disinfectant or cleanser to use. The golden rule of course is that, whatever the level, cleaning must precede disinfection.

It may be seen by many as an incredibly boring subject but these simple protocols make it easy for a clinic to have first class disinfection control in place.

the day after that; or perhaps next week; Next month; Next year. Who really cares?"

Tony then asked Nagy if there was an equivalent term in his native language.

"Nah", he replied, "We don't have a word to describe that degree of urgency."



NZVA and AMR

The *topic du jour* is clearly the statement from NZVA pertaining to antimicrobial stewardship. The statement itself reads "That by 2030 New Zealand Inc. will not need antibiotics for the maintenance of animal health and welfare." That is it, quite simple really, despite the pages of explanatory notes that went with it. If written in a normal size 10 font there is only one line, yet so many are attempting to read between the lines.

There are six separate sections of explanatory notes and the third section (Why is it important?) has 10 comments pertaining to the importance of veterinary antimicrobial stewardship, one being "Approximately 75% of new diseases that affect humans have come from animals over the last 30 years." Despite the minor part that this comment makes in the context of the whole document many critics have latched on to it as an example of lack of science. It is actually good science but it proves very little in the context of this debate, neither one way nor the other.

A lot of criticism from the profession was with regards to lack of prior consultation. The statement was meant to create shock and awe and it certainly did that among the veterinary profession, but maybe not with the intended target, the general public. Prior wide consultation would dilute that effect and there was the ever present fear of a leak, weakening the overall statement.

In fact NZVA did consult branch presidents and also Industry stakeholders on the day prior to the announcement and the former spoke generally in favour, including the large animal SIBs. The one query from the Industry was to the mandate the Board thought they had. Boards are elected to govern and,

in a democracy, if the wider members do not like the decisions they can vote Board members out but, in the meantime it is counterproductive to consult on every decision. In addition the positive response from most of the branches would be mandate enough.

There is a lack of definition in the statement itself, but that is a necessity. Nothing in nature is in black and white and drawing lines in the sand for 15 years in the future is not terribly sensible. Yet despite this lack of definition people are reading definite inferences such as "elimination of antibiotics by 2030".

Not only have practitioners and pharmaceutical industry personnel had this misconception but also Federated Farmers and some meat export groups have even been excited about the marketing prospects of selling meat "not tainted with antibiotics." Talk about scientific values! Antibiotics are good, not bad, but just should not be regarded, as they often are by many farmers, as panaceas.

The important thing is to read what is in the statement, not to concentrate on things that are not in it. Nowhere does it say that antibiotics will be banned or withdrawn. In the 80s we had nuclear disarmament, this did not mean the end of nuclear weapons but

stopped their ridiculous proliferation and thus making the world a slightly better place today than it could have been.



"Nowhere does it say that antibiotics will be banned or withdrawn."

We will still be using antibiotics as we are currently for the near future and the statement foreshadows a long term policy of moving away from the current over dependence and helping veterinarians educate the wider public. A big problem at the moment, to plagiarise Scott McDougall, is the pressure of 'Elsewhere Veterinary Clinic'. This is a reason why many feel it is difficult to be too zealous in antimicrobial stewardship. However buying into NZVA's long term vision should aid in reducing this pervasive influence.

The big problem we have is that, although we are responsible users overall, outside influences are still pointing the finger and we are not being listened to; a leading politician says that we are compromised because we sell antibiotics (actually using the term self-interested drug peddlers). By taking this stance we are telling the outside world our house is in order, now you get your house in order.

The whole process is designed to keep the veterinary industry as the custodians of antibiotic use in ani-

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NZVA and AMR

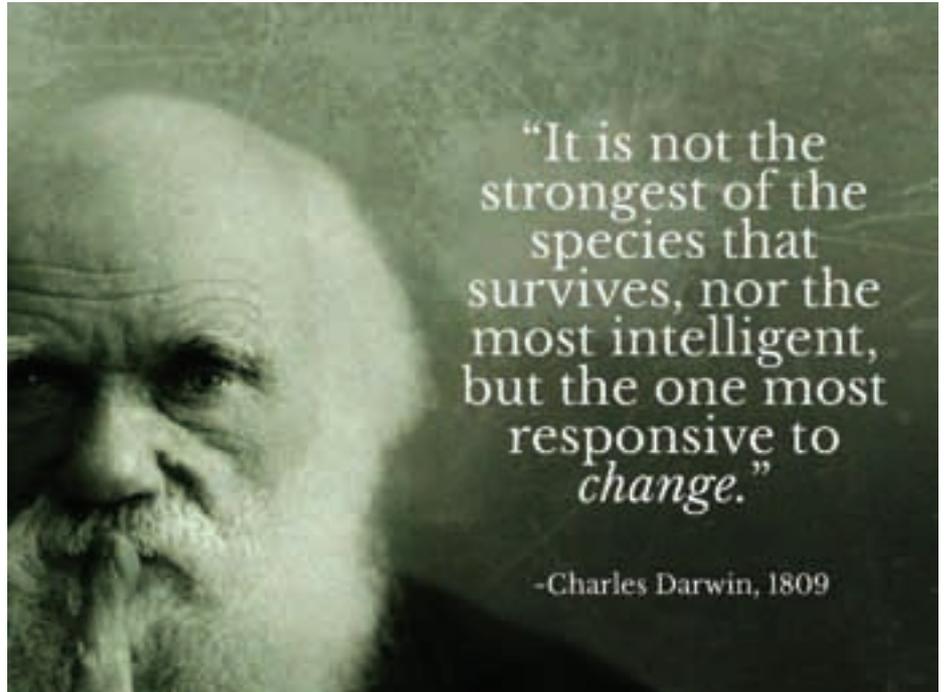
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mals, thus protecting veterinarians' right to prescribe.

By this action the NZVA Board has moved beyond the usual committee style rhetoric calling for more data and inaction to a transformative goal that requires action.

So where to from here? Antimicrobial stewardship has been based on the principle of the three Rs (Refinement, Reduction and Replacement). People always seem to add to acronyms, remember the old ICE for acute injuries and how it has morphed into RICED and possibly beyond? The three Rs have been added to with Responsibility and Review padding them out to five Rs. We certainly do not want to see Regulation and Retailation (where the decisions are made by corporates such as McDonalds and Chick Fil A) added so making seven Rs.

Targets may be set but natural attrition will see them become very achievable. For example the dramatic rise in the use of teat sealants will greatly reduce the use of dry cow intramammary antibiotics over the next few years; one does



not need to be a great prophet to foresee that, and we all should be aware of the mantra of Charles Darwin, *"It is not the strongest of the species that survives nor the most intelligent, but the one most responsive to change."*

Setting targets such as eliminating certain antibiotic classes would be counterproductive and totally defeat the aims of the statement itself. Surely taking ownership of

antibiotic stewardship, as this statement does, makes the veterinary profession the guardians of antimicrobial usage and enhances the profession's right to use and prescribe antimicrobials.

It does not make pharmacological sense either as restricting one class only puts more selection pressure on another.

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The Jewish Samurai

Once upon a time, a powerful Emperor of the Rising Sun advertised for a new Chief Samurai. After a year, only three applied for the job: A Japanese, a Chinese, and a Jewish Samurai.

"Demonstrate your skills!" commanded the Emperor.

The Japanese samurai stepped forward, opened a tiny box, and released a fly. He drew his samurai sword and *Swish!* the fly fell to the floor, neatly divided in two!"

"What a feat!" said the Emperor. "Number Two Samurai, show me what you do."

The Chinese samurai smiled confidently, stepped forward and opened a tiny box, releasing a fly. He drew his samurai sword and *Swish! *Swish!*

The fly fell to the floor neatly quartered.

"That is skill!" nodded the Emperor. "How are you going to top that, Number three Samurai?"

The Jewish samurai stepped forward, opened a tiny box releasing one fly, drew his samurai sword and *Swoooooosh! * flourished his sword so mightily that a gust of wind blew through the room. But the fly was still buzzing around!!!

In disappointment, the Emperor said: "What kind of skill is that? The fly isn't even dead."

"Dead?" replied the Jewish Samurai, "Dead is easy. But..., Circumcision...???"

NZVA and AMR

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The focus should be on disease management and prevention. Vaccination, infection control and farm management practices will all play a vital part so that there will be reduced (but certainly not no) indications for antimicrobial therapy. Advances in hygiene standards and principles make this a reality, and education of the profession and the general public make it possible.

With the knowledge that there is a dearth of new molecules available the cry has been to use what we have better, in order to slow resistance development.

Research into techniques of use, such as the SISAAB (single injection short acting antibiotics) for concentration dependent classes certainly shows promise. Using what we have in a smarter fashion should be part of the overall picture.

The statement 'New Zealand is the world's third lowest user of antibiotics on animals' clearly refers to

major animal product producers but the point is that we are currently very good, intend to be even better and really we are saying to the world you can do this too. It is nothing but positive for NZ Inc.



"Using what have in a smarter fashion should be part of the overall picture."

Lincoln made the incredibly bold, at the time, decision to emancipate the slaves half way through the American Civil War. A major effect was the prevention of Britain and Europe recognizing the Confederacy, thus keeping the Union intact.

This bold move by NZVA should have the effect of pointing the finger of blame for antimicrobial over-use where it belongs and well away from the veterinary profession.

Just as Lincoln went on to be seen as the guardian of his nation's morals, the veterinary profession, by dint of its own bold move, will be seen as the most responsible group to oversee antimicrobial prescription and infection control in our animals.

History has been very kind to Lincoln, despite the unpopularity of his action at the time; although this move by NZVA is not nearly as definitive (it is an aspirational goal after all) the odds are that, in the decades to come, history will see the NZ veterinary profession in 2015 as incredibly progressive.

Greece

Some years ago, a small rural town in Spain twinned with a similar town in Greece.

The mayor of the Greek town visited the Spanish town. When he saw the palatial mansion belonging to the Spanish mayor, he asked how on earth he could afford such a house.

The Spaniard replied: "You see that bridge over there? The EU gave us a grant to construct a two-lane bridge, but by building a single-lane bridge with traffic lights

at either end, I could build this place."

The following year, the Spaniard visited the Greek town. He was simply amazed at the Greek mayor's house: gold taps, marble floors, diamond doorknobs....it was marvellous.

When he was asked how he'd raised the money to build this incredible house, the Greek mayor said: "You see that bridge over there?"

The Spaniard replied: "No."



Not Really Funny

The piece below was sent as a 'funny' but is far too long for the normal type of humorous filler used in this newsletter.

God To St Francis

Frank, You know all about gardens and nature. What in the world is going on down there on the planet? What happened to the dandelions, violets, milkweeds and stuff I started eons ago? I had a perfect no-maintenance garden plan. Those plants grow in any type of soil, withstand drought and multiply with abandon. The nectar from the long-lasting blossoms attracts butterflies, honey bees and flocks of songbirds. I expected to see a vast garden of colours by now. But, all I see are these green rectangles.

St Francis: It's the tribes that settled there, Lord. The Suburbanites. They started calling your flowers 'weeds' and went to great lengths to kill them and replace them with grass.

God: Grass? But, it's so boring. It's not colourful. It doesn't attract butterflies, birds and bees; only grubs and sod worms. It's sensitive to temperatures. Do these Suburbanites really want all that grass growing there?

St Francis: Apparently so, Lord. They go to great pains to grow it and keep it green. They begin each spring by fertilizing grass and poisoning any other plant that crops up in the lawn.

God: The spring rains and warm weather probably make grass grow really fast. That must make the Suburbanites happy.

However it does carry a very serious message and fits the tone of this edition, which focuses on another environmental issue (AMR).

St Francis: Apparently not, Lord. As soon as it grows a little, they cut it-sometimes twice a week.

God: They cut it? Do they then bale it like hay?

St Francis: Not exactly, Lord. Most of them rake it up and put it in bags.

God: They bag it? Why? Is it a cash crop? Do they sell it?

St Francis: No, Sir, just the opposite. They pay to throw it away.

God: Now, let me get this straight. They fertilize grass so it will grow. And, when it does grow, they cut it off and pay to throw it away?

St Francis: Yes, Sir.

God: These Suburbanites must be relieved in the summer when we cut back on the rain and turn up the heat. That surely slows the growth and saves them a lot of work.

St Francis: You aren't going to believe this, Lord. When the grass stops growing so fast, they drag out hoses and pay more money to water it, so they can continue to mow it and pay to get rid of it.

God: What nonsense. At least they kept some of the trees. That was a sheer stroke of genius, if I do say so myself. The trees grow leaves in the spring to provide beauty and shade in the summer.

It is thought provoking as well as very amusing. And so the question to be asked is, "Are you a member of the Suburbanite Tribe?"

In the autumn, they fall to the ground and form a natural blanket to keep moisture in the soil and protect the trees and bushes. It's a natural cycle of life.

St Francis: You better sit down, Lord. The Suburbanites have drawn a new circle. As soon as the leaves fall, they rake them into great piles and pay to have them hauled away.

God: No!?! What do they do to protect the shrub and tree roots in the winter to keep the soil moist and loose?

St Francis: After throwing away the leaves, they go out and buy something which they call mulch. They haul it home and spread it around in place of the leaves.

God: And where do they get this mulch?

St Francis: They cut down trees and grind them up to make the mulch.

God: Enough! I don't want to think about this anymore. St. Catherine, you're in charge of the arts. What movie have you scheduled for us tonight?

St. Catherine: 'Dumb and Dumber', Lord. It's a story about....

God: Never mind, I think I just heard the whole story from St Francis.



An Inspirational Grampa Tale

Last week, I took my grandchildren to a restaurant. My eight-year-old grandson asked if he could say grace.

As we bowed our heads he said, "God is good, God is great. Thank you for the food, and I would thank you even more if Grandpa gets us ice cream for dessert. And liberty and justice for all! Amen!"

Along with the laughter from the other customers nearby, I heard a woman remark, "That's what's wrong with parenting these days. Kids today don't even know how to pray. Asking God for ice cream! Why I never!"

Hearing this, my grandson burst into tears and asked me, "Did I do it wrong? Is God mad at me?"

So after I assured him that he had done a terrific job and that God

was certainly not mad at him, an elderly gentleman approached the table.

He winked at my grandson and said, "I happen to know that God thought that was a great prayer."

"Really?" my grandson asked.

"Cross my heart," the man replied.

Then, in a theatrical whisper, he added (indicating the woman whose remark had started this whole thing), "Too bad she never asks God for ice cream. A little ice cream is sometimes good for the soul."

Naturally, I bought my grandchildren ice cream at the end of the meal. My grandson stared at his ice cream for a moment, and then he did something I will remember the rest of my life.

He picked up his sundae and, without a word, walked over and placed it in front of the woman.

With a big smile he told her: "Here, this is for you. Shove it up your nose, you grouchy old bitch!"

Kind of brings tears to your eyes, doesn't it.

