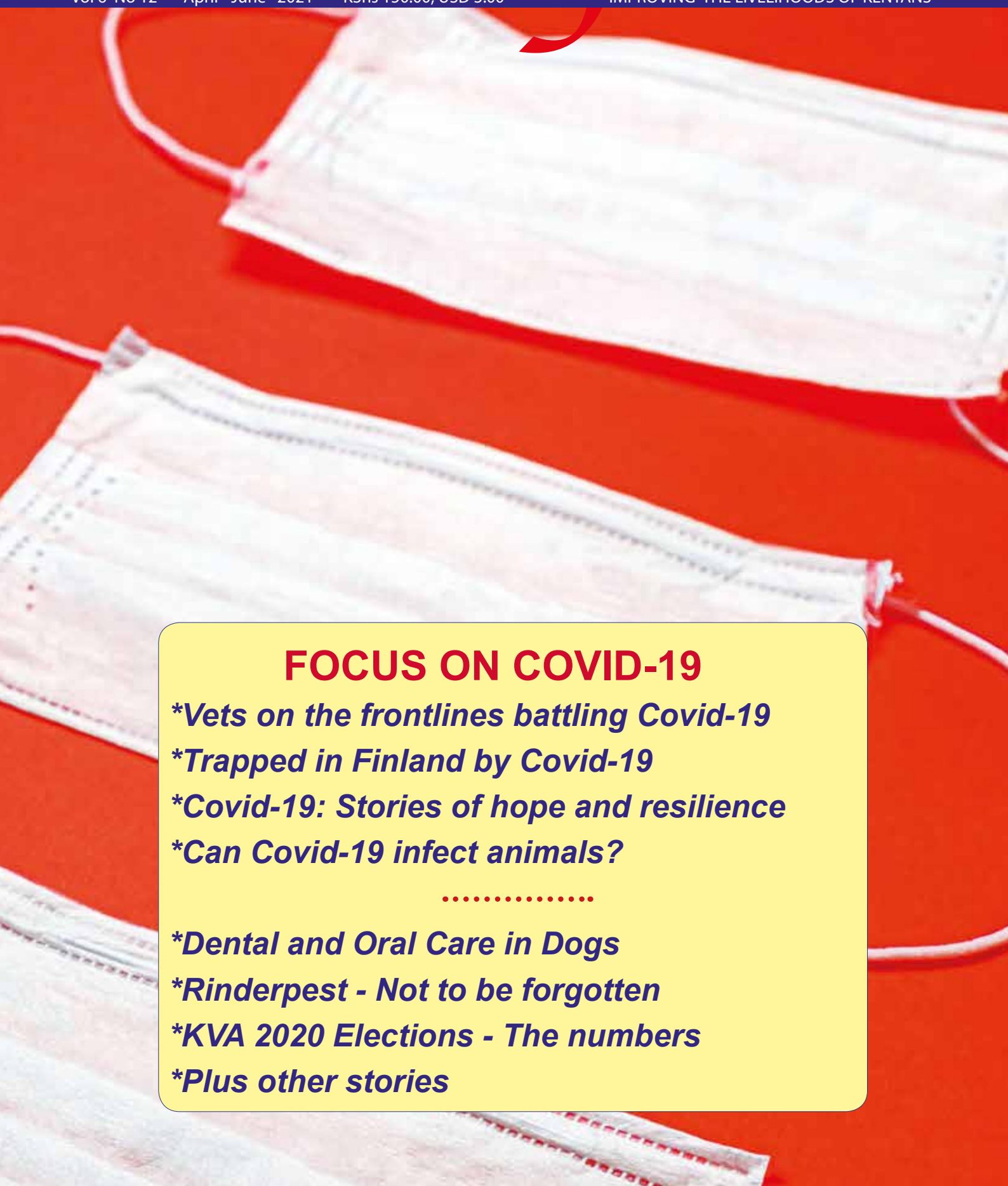
Animal focus

Vol 6 No 12 April - June 2021 KShs 150.00; USD 3.00 IMPROVING THE LIVELIHOODS OF KENYANS



FOCUS ON COVID-19

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*Trapped in Finland by Covid-19

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.....

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Editor's perch

Covid-19 changed the world forever. How do we cope?

Just before Covid-19, everything went on just as usual. You would go to Java for a coffee and find the place packed up, with everyone competing for the free wifi. On a Friday night, as you made the way home, you would hear the revelry of the clubbing crowd as they danced and drank the night away. On a Sunday, church would be full up, and of course there would be the scant parking spaces that test practical Christianity too near a church for comfort. The same would apply on Friday afternoons around the mosques. The daily grind went on as usual, as competition within and without organizations defined our existence. Oh Yes, and school went on more or less as it has always done.

And then one day in March 2020, our world changed forever. Curfews and movement limitations were put in place. Restaurants, bars, entertainment joints were closed up. School closed up. Workplaces moved home. Church and mosque and other forms of public worship were closed down. Many were preparing for a variety of international conferences that were scheduled to take place both within and without the country. In one day, all those meetings got cancelled.

And after one year of interrupted dreams and lives, just when it seemed that things were getting back on track, and we could get back to our normal pursuits, Covid-19 wave three hit. This wave is probably the most demoralizing one of all of the three waves we have experienced so far. Wave 1 was shocking and our adrenaline levels were up and ready for whatever it took to contain the situation. Wave two barely registered and we began feeling like the worst was over. Then wave three sneaked in on us and suddenly we are wondering - will this thing ever go away?

Experts are of varied opinion. Some say that with vaccination protocals now in place, and more people being vaccinated everyday, probably by the end of 2022, life could go back to normal since most of the population will have been vaccinated. A second group of experts tell us that vaccination is not guaranteed protection because other strains of Covid-19 may come up and current vaccines may not be sufficient to protect us fully. This group of experts say that masks, social distancing and constant hand sanitization are with us for the long haul. So how do we get on with our lives?

Four strategies come to mind. First, we must now embrace the online life more fully than ever before. We shall lose in the realm of personal interaction, but with all the accompanying risks of infection, this is a loss we can afford. Second, we must keep up our preventive hygiene practises in top gear, no matter whether we are vaccinated or not. Third, though vaccines are in short supply, if anyone can get it done, please do. That is a weapon most useful in the battle. But lastly, let us not give up in spirit. Let us keep our hopes up for this too shall pass.

Simon.

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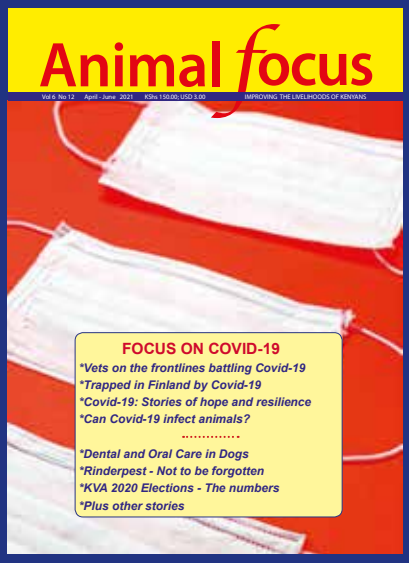
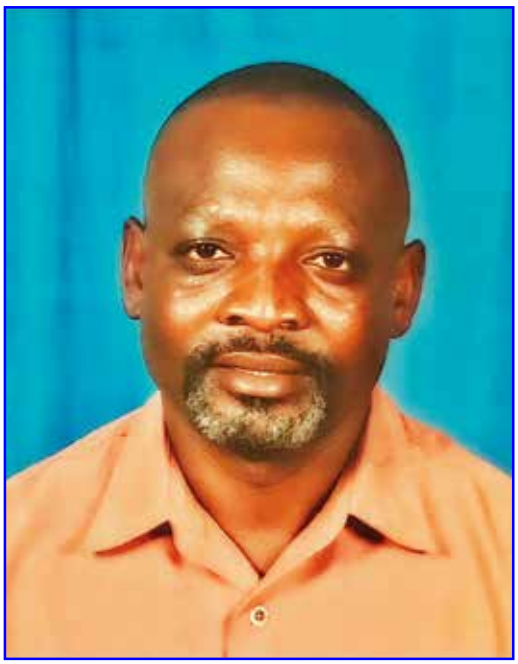


LEADING DURING THE TOUGH TIMES

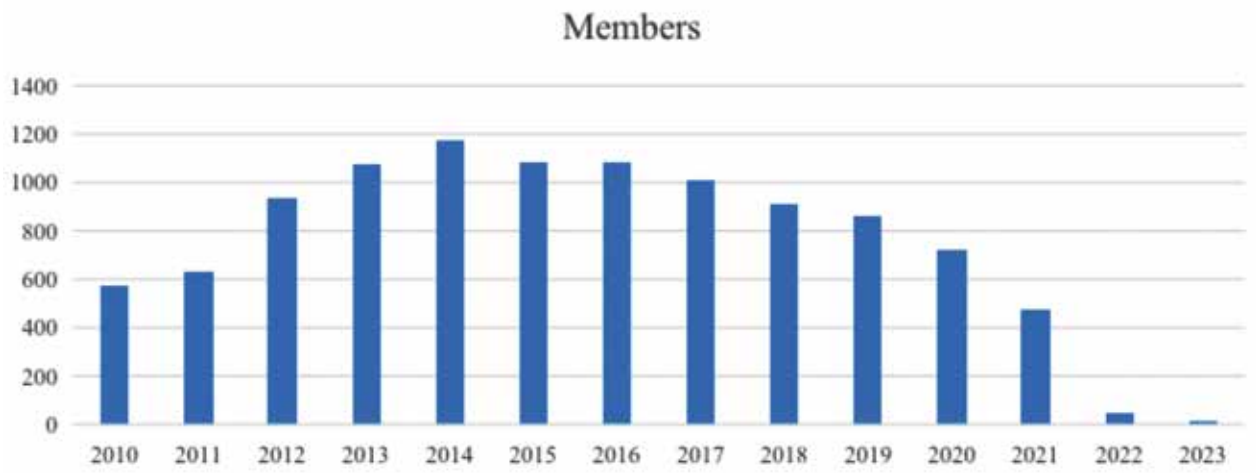


Dr Nicholas Muyale, KVA National Chairman

The current Kenya Veterinary Association (KVA) leadership took over the leadership mantle on 1st of October 2020. This followed a hotly contested election, the first ever competitive election since inception of KVA. The new office has faced numerous challenges and continues to face many more due to the environment in which the leadership operates.

COVID-19 came with the challenges of meetings and resource mobilization. The National executive committee has held numerous virtual meetings as part of getting organizational direction and forming as a team. Coming out of a divisive election meant the new team needed to work towards team formation, which has not been easy. With COVID-19 restrictions, physical meetings which have been largely the income generating activities for KVA collapsed. KVA largely depended on traditional sponsors and partners who have been greatly affected by COVID-19. With no single project running, the new leadership is working towards establishing new projects or reviving some of the projects that ceased during the previous leadership. There is a glimmer of hope, despite the discouraging surroundings.

Looking at KVA thematic areas, we have taken membership welfare as a key area of focus. A number of activities around members' welfare have been shared to the members including the opportunity desk, information sharing through regular updates, insurance packages, free or subsidized continuous education, and many more. We are working on how to address the issue of dormant membership. KVA membership has been dwindling over years as seen in this chart.



Poor membership retention remains to be the single most challenge for KVA leadership to address. Active membership is what defines any vibrant organisation.

The next one year, we have clear deliverables that must be achieved if KVA is to remain relevant and vibrant. The key areas of focus are membership, finances, and animal welfare projects.

- Membership: we will endeavor to address the challenge of dormancy/inactive membership, give value to members, and address welfare concerns.
- Finances: we need income generating activities and increase the number of partners.
- Animal welfare projects: at least one or two projects should be running in the coming year. The opportunities are diverse ranging from lobbying and advocacy to community outreach and empowerment.

In summary, KVA has a long way to go in realizing her aims and objectives as an organization. It will require a united and focused leadership, active membership, and goodwill from partners. Thank you.

KVA Chairman
Dr. Muyale Nicholas

2020 KVA elections: The heat and the dust

By Dr. Othieno Joseph

In September 2020 registered members of the Kenya Veterinary Association went into the polls to elect their leaders. 2020 elections were unique in many instances and will go down the history annals as one of the hotly contested in the history of the association.

It was during the COVID19 pandemic that saw the government place a ban on any form of gatherings. As a sequel this was the only year that the association missed to have its national scientific conference which had been scheduled for April in Malindi. The elections had delayed from the traditional April month and the office holders had to stick on as they sort avenues for doing the elections online but within the constitution.

As this dragged on so did the campaigns get prolonged. The posts of the chairman, vice chairman and that of the committee members were the most hotly contested. There were three very strong candidates and it was hard telling who will carry the day. Dr. Muyale Nicholas came in with a mantra of youthful and radical leadership, Dr. Abraham Sangula campaigned on a platform of wisdom that comes with age and experience while Dr. Mary Mathenge had a strong leaning towards better private veterinary sector where she enjoyed had been endorsed. The three ideologies each were good to the association but presented a daunting task to voters.

The post of vice chairman attracted an equally stronger trio composed of Dr. Solomon Onyango a world-renowned animal welfare activist, Dr. Paul Egesa an animal geneticist with a global track record and Dr. Sabuni Alex a former vet of the year award winner. This too was a headache to the electorate but a blessing to the organization which stood to benefit the direction of the die notwithstanding. Ten committee members lined up for the three slots. The ten contestants had a rich experience.

So, this begged the question; what was it about the association that had attracted such an enormous number of contestants. Maybe this will be answered as we move on and see how this new leadership drives the association.

Campaigns took off on a high note and every contestant exploited any available opportunities to market their manifestoes. It was the first KVA campaign where voter seekers designed posters and

shared on social media platforms. It was the first campaign that had fierce foot soldiers ready to defend their preferred candidates at any cost. Notable campaigners included Dr. Carolyn Asanyo, Dr. Kamagy Maduma, Dr. Gabrial Ouma, Dr. Bosco Kimathi, Dr. Dennis Onkundi to mention but a few. They defended their preferred candidates and it was not uncommon for debates to get personal and tempers flared. Social media platforms were on fire necessitating countless cease fires. But it did not take long before the fire embers lit up. Of course, propaganda came in to ignite emotions and sway a vote or two in favor of a candidate.

The association under leadership of Dr. Samuel Kahariri offered a much-needed platform for the leaders to peacefully market their agenda for the association. An online debate was organized for the contestants. This served to educate the members on the contestants' portfolio; whether it influenced their choice is a matter that may be researched later.

Breakdown of the KVA Election Results

Position	Candidate	Votes won
National Chairman	Dr Nicholas Muyale	225
	Dr Abraham Sangula	199
	Dr Mary Mathenge	105
National Vice Chairman	Dr Paul Egesa	267
	Dr Abraham Sabuni	208
	Dr Samuel Onyango	52
Hon Secretary	Dr Emily Mudoga	319
	Dr Isaiah Chacha	204
Hon Vice Secretary	Dr Lilyan Maathai	Unopposed
Hon Treasurer	Dr Purity Kiunga	298
	Dr G Kaaria	225
Hon Vice Treasurer	Dr Kelvin Osore	353
	Dr D Obiero	164
Committee Member	Dr Kelvin Momanyi	290
	Dr Daniel Ksee	236
	Dr J Kiama	234

ADAPTING TO COVID-19:

Stories from Kenya (Source: one.org)

The COVID-19 pandemic is not only a public health emergency, but also a major threat to the African economies. While the virus itself has been slower to impact Africa than other parts of the world, the drastic declines in global trade and travel — combined with measures like quarantines aimed at preventing the virus' spread — are significantly impacting economies and well-being across the continent.

Lockdown of economies

Partial or total lockdown of economies during the pandemic may reduce Africa's projected GDP growth in 2020 from the projected 3.2% to 1.8%, according to the United Nations Economic Commission for Africa (UNECA). It will also result in unemployment of many Africans.

In Kenya, the partial lockdown and restrictions in movement, which were put in place at the beginning of the pandemic, have resulted in the disruption of the various sectors of the economy, including tourism, agriculture, transport, and the entertainment industry. According to the ONE Africa COVID-19 Tracker at least 130,000 formal jobs have been lost, while 500,000 workers have been put on unpaid leave.

Kenya situation

Kenya is one of the seven African countries that have reported more than 30,000 COVID-19 cases, having seen a steady rise in infections over the past month with over 500 fatalities to date. The country has 259 ventilators, 1 for every 206,000 people, as of October, according to the ONE Africa COVID-19 Tracker.

During a national address on the COVID-19 pandemic, Kenyan President Uhuru Kenyatta remarked, "Our economic health as a country is ultimately tied to keeping our infections and fatalities as low as possible. There will be little tourism, scarce investment and falling trade if our headlines start to match those of countries that have been hardest hit by the pandemic."

COVID-19 has unexpectedly affected the lives and livelihoods of all Kenyans. Here are five stories that give a snapshot of COVID-19's impact.

Personal hygiene became a must in stopping Covid-19

Story 1

Avido, fashion designer, Kibera, Nairobi county

Renowned Kibera-based fashion designer David Ochieng, popularly known as Avido, is renowned for his wax-print bomber jackets. He got his big break in June 2019, after being featured in the Black Parade Route, a new initiative by Beyonce Knowles to support Black-owned small businesses by featuring their catalogs on her website. As soon as the pandemic started, Avido saw a big dip in his business.

Avido was born and raised by a single mother in Kibera, Kenya's largest informal settlement located 6 km from Nairobi's capital. The challenges in Kibera mirror other big informal settlements or slums in the world, dotted with tin-shacks and home to over 70% unemployed young residents, with no access to electricity, clean piped water, and proper sanitation facilities.

Avido is passionate about empowering his community in Kibera, which is why he decided to produce and distribute thousands of masks for free in Kibera during the COVID-19 pandemic.

"I decided to do something to help my community during this difficult time. My business of designing and selling clothes for social events has been affected by the pandemic, but I am glad that I am able to do something instead that can guarantee employment and provide protective gear for free to my community in Kibera," he said.

According to Avido, most of Kibera's residents work in the informal sector and are unable to afford a mask (retailing at $0.50) with their daily earnings of between $3-5. "With my mask distribution campaign, I provide employment to the youth and women who help with the design and stitching of the masks."

His 12-person team helps him to cut and stitch masks, made with fabric he had collected in his four-room shop over the years. He has managed to secure additional funding through donations to buy more fabric and elastic and to pay his team.

Story 2

Samuel, Safi organics, Mwea County

Samuel Rigu is a young entrepreneur based in Mwea County. In 2013, Rigu co-founded Safi Organics, a low-cost fertilizer company that makes organic fertilizers from farm harvest waste such as rice husks. Safi organics fertilizer is affordable and designed to improve yields for rural farmers by up to 30%.

Since April, Samuel has been incurring huge losses as a result of the locust infestation that ravaged East African farms and the COVID-19 pandemic, which has further disrupted trade and farming, including efforts to protect crops from the locusts.

"The COVID-19 pandemic has reduced our fertilizer sales," Rigu explains. "Most of our customers who are farming vegetables and herbs for the export market have suspended their operations due to the travel restrictions limiting the transport of cargo to Europe. We have experienced a 40% decrease in sales. Before COVID-19 we sold over $10,000 monthly."

Following the lifting of travel restrictions to Nairobi in late July, farmers have been able to transport their food produce to local markets, and are beginning to see an increase in sales. Despite the uncertainty about the pandemic, Rigu is optimistic that the future holds a silver lining: sales had picked up to $60,000 by August.

Story 3

Lilian, cleaner, Kibera, Nairobi County

For Lilian Ochieng, a mother of four who lives in Kianda in Kibera, COVID-19 has made life more difficult. Before the pandemic, Lillian used to work as a cleaner in Langata, a posh estate that neighbours the Kibera slums.

"My employers have been confined to their houses since the pandemic started. I used to clean their houses, but now my services have been reduced to just washing clothes for them, and this is done outside the house. Whenever I visit their houses, they consider me a risk for spreading the coronavirus," says Lillian.

With the rise of infection rates, most of her clients have stopped giving her work or have since reduced her pay due to the tough economic times caused by job losses and pay cuts.

"Before the pandemic, I used to earn more than $6 daily. I am now unable to make even $3 a day. It is difficult for me to feed my family," she says. The Kenyan government is using direct distribution and

cash transfers and is piloting an innovative programme. But the programmes depend on state-level implementation, and capacity varies significantly, leading to inconsistent approaches. Not all cash transfer programmes reach the people they need to for lockdowns to work.

Lillian is faced with another challenge: With schools closed, she has no one to watch her school-aged kids when she leaves the house to look for work. Her four children are among the 15.3 million Kenyan children affected by the school closures since March 2020.

Story 4

George Were, farmer, Kitengela, Kenya

George Were is well known for his organic chicken farm and the vegetable haven that he has created at his home in Kitengela, located over 30 km from Nairobi. Currently, he raises over 500 indegenous birds in his farm.

But since the start of the pandemic, he has witnessed a 50% decline in sales of chicken and eggs from his farm, as most of the bars, eateries, schools, and catering companies he used to supply have closed.

In an address to the nation on 26 August, President Kenyatta extended the closure of bars for another 30 days and ordered that restaurants close by 8pm. "This extended closure means that I will still not be able to supply my chicken to restaurants and pubs," Were explains. "The price of maize and chicken feeds has also gone up since the pandemic due to the maize shortage brought about by high transport costs incurred by farmers since the pandemic."
"I have been forced to pass on the extra operating costs to my customers. Before the pandemic, we would sell dressed birds at $12 per bird, now we sell each bird at $15, which is expensive for my customers," he adds. Food inflation in Kenya currently stands at 5.4%, and was as high as 8.2% over the summer. A deficit in maize is being bridged by imports from Uganda.But since the end of April,COVID-19 tests for drivers can lead to up to 30km queue for lorries at the border.

"The pandemic has forced me to change my business strategy. I now sell chicken and eggs directly to families because most people are operating from home and are unable to visit eateries," Were explains

Story 5

Anyiko, publicist and events organiser, Nairobi County

Anyiko Owoko is a celebrated figure in East African entertainment and Music. She has managed the public relations of major events such as Coke Studio Africa and artists such as Yemi Alade from Nigeria, Sauti Sol from Kenya, and many more. Prior to the crisis, Owoko's Nairobi-based business, Anyiko Public Relations, was thriving and overrun with bookings of events and PR campaigns for artists. But the ongoing events ban and curfew in Kenya has greatly impacted her business.

"We can't host listening parties, press conferences, and album launches and concerts. That is a big hit to the entertainment industry, which employs many young people. Many creatives work in the sector or the Jua Kali sector, which is the primary economic engine in Kenya as it employs over 70% of the country's labour force," she says.

As the virus continues to spread, artists are now adapting to a new way of working virtually as they conduct social parties on their social media pages. This further impacts Anyiko's ability to make a living in her profession, in a country which has already seen more than 130,000 formal jobs have been lost, while 500,000 workers have been put on unpaid leave.

TOP 7 TIPS ON HOW TO STAY SAFE FROM COVID-19

- Stay at least two metres away from people outside your own home.
- Wear a face mask when away from home, which should be washed each time you return.
- Wash your hands often, especially when you get home or entering and leaving a shop or market, and before you touch your nose, mouth and eyes.
- Sneeze and cough into your elbow, not into your hand, so that if you have the virus it does not spread upwards and outwards.
- Advocate for the provision of hand-sanitisers or hand-washing when entering shops and markets.
- Wash your hands before you enter your home to avoid bringing the virus in on your hands.
- Don't stigmatise people who have COVID-19. If that happens then many people will hide their condition and continue to go out in public, infecting more people.

Covid Statistics as at End of March 2021: Top 10 World & Top 10 Africa

Worldwide Staistics:
No of Cases - 131 Million Recovered - 74 Million Deaths - 2.84 Million

No	Country	No of Cases	Recovered	Deaths
1	USA	30.7 Million	Not Available	554,000
2	Brazil	13 Million	11.3 Million	330,000
3	India	12.5 Million	11.6 Million	165,000
4	France	4.74 Million	Not Available	96,493
5	Russia	4.52 Million	4.15 Million	98,363
6	UK	4.36 Million	Not Available	127,000
7	Italy	3.65 Million	2.97 Million	111,000
8	Turkey	3.45 Million	3.08 Million	32,078
9	Spain	3.29 Million	Not Available	75,541
10	Germany	2.89 Million	2.58 Million	77,010
No	Country	No of Cases	Recovered	Deaths
1	South Africa	1.55 Million	1.48 Million	52,954
2	Morocco	498,000	485,000	8,842
3	Tunisia	258,000	219,000	8,931
4	Ethiopia	213,000	161,000	2,936
5	Egypt	204,000	161,000	12,123
6	Nigeria	163,000	152,000	2,058
7	Libya	161,000	148,000	2,684
8	Kenya	138,000	93,650	2,206
9	Algeria	118,000	81,813	3,102
10	Ghana	90,674	88,426	744

FROM THE FRONTLINES

The vet who has led a team that carried out 14,000 COVID-19 tests and still counting

The vet who has led a team that tested 14,000 COVID 19 tests and still counting, Dr Joseph Kamau, has been in between calls, what a layman would describe as high voltage calls. It has been 40 minutes since I made my first call that indicated the user is busy.

Finally the user calls me back. A bubbly caller he is. This does not depict an exhausted soul after a long day at work. He finally clears his voice and asks what my sort after interview is all about.

"This is about COVID 19 doc and your role in it," I retort. He giggles and asks me what I want to know about. My interview sought Dr. Kamau because he is a veterinarian by training. He has however metamorphosed into someone really serious.

He holds a PhD in molecular biology and a post graduate diploma in zoonosis control. He is currently a senior research scientist and the head of the molecular biology lab at the Institute of Primate Research (IPR). On a routine day, Daktari and his

Dr Kamau in the laboratory

team would be working on routine research protocols which majorly involve research on animal and primate viruses which include viruses that cause respiratory distress, corona viruses and influenza viruses.

A different year

The year 2020 was however a different year. Covid-19 came knocking and the ground immediately shifted under his feet. He would get into a completely new foray. Something he does routinely but now under extremely demanding conditions; a pandemic. He conveniently describes it as an all systems go scenario. They would be forced to conform and completely shift their lab to a Covid-19 testing and research lab overnight. Definitely it took longer, but it seemed to have happened overnight.

Picture this; a pandemic is ravaging a poor African country, people are dying and more seem to be on the queue. Then you are tasked with testing samples for the monster disease no one knows about. As new as it is, you have to face it. This is however in a condition that for some reason feels like a state of emergency. The politicians are in the meantime closely following your activities armed with tones of rumors, misinformation and roadside declarations.

Joseph marshaled his team, undertook training on Covid-19 testing, and procured the right laboratory equipment and the right protective gear. It was all systems go. The team also got into research on closely linked corona virus families related to Covid-19 and among other respiratory viruses. Samples would be submitted, analyzed, and results submitted to the ministry of Health for dissemination by the ministry officials. The results were generated directly under the supervision of Dr Kamau, a veterinarian! This is how powerful One Health as a principle is!

The nagging worry

Despite such a stellar job, the scientist in him kept bugging him. He was worried about his results and the impact of the same on the socio-economic well being of patients. This was in light of the stigma that characterized the disease, the quarantine, the inability to travel as well as one being being a public risk. Being that this was a fairly new disease, new test and new everything, the worry was diagnosing a healthy person as Covid-19 positive (false positive) and diagnosing a Covid-19 patient as Covid-19 negative (false negative). The ramifications of both

Dr Kamau goes through results with a colleague

scenarios would be felt far and wide on the life of any of the patients affected by either scenario. The worst however he reckons would be a false negative result – especially if the sample belonged to a politician. A big group of people would catch Covid-19 ha!

Challenges galore

Challenges were to abound. Turf wars would distract them from this very critical duty to the country. The Kenya Medical Laboratory Technicians & Technologists Board (KMLTTB) soon came calling. They felt their territory had been invaded by wannabes. And they had to flex their muscles, wanting the testing lab to meet the set preconditions for such assignments. They would later realize that in pandemics, it is all systems go. The war was postponed for the boardroom at a later date.

Being a new test, all laboratory reagents were sourced outside the country amid full blown global demand and lockdowns. The reagents and other consumables were thus rare commodities sometimes hampering efficiency in testing. There was however a risk closer home, the risk he and his

team posed to themselves and their families. They were at the risk of getting infected and infecting their families.

.....the worry was diagnosing a healthy person as Covid-19 positive (false positive) and diagnosing a Covid-19 patient as Covid-19 negative (false negative). The ramifications of both scenarios would be felt far and wide on the life of any of the patients affected by either scenario.....

In light of this, the testing team and Daktari himself became a target of workplace stigma. The front soldiers were shunned by the comrades who should have been there to cheer them up. They could not interact freely; common places like the cafeterias were no-go zones and their offices got lonely. Luckily, he already had a spouse! Getting one under such circumstances would have taken a miracle. This called for more protection and meticulousness. Ten months on, they are still safe and serving their motherland – Kenya.

One Health approach

Today, the pressure is easing; Daktari thinks there would be no better time to advance the One Health approach of tackling zoonoses and pandemics than now. He thinks Covid-19 exposed our soft underbelly — The poor financing in research and lack of the required infrastructure to combat such challenges. He affirms the importance of cross linkages between labs, professionals among other opportunities to improve the country's preparedness to combat such pandemics.

As a mentor, he speaks to the young professionals, specifically veterinarians, on the opportunities that exist in other disciplines and in partnering with other professionals under the one health banner. He says that each and every one of us has a role to ensure that the next pandemic is predicted, detected and prevented before it happens. This can only be done through active surveillance, information sharing across health professionals, proper lab and diagnostic infrastructure as well as curriculum review to include pandemic preparedness as basic knowledge at all levels of learning.

Having been on the frontline, Daktari still tells you to mask up, wash your hands and Keep social distance even as you sleep.

Dr Kamau is the head of the molecular biology lab at the Institute of Primate Research (IPR)

Tale of Covid-19 Kenyan Vet trapped in Finland

When Dr Joseph Ogolla left Kenya for Finland on 29th May 2019, he was sure that the six months allotted to his lab work was all he needed away from home. That was before Covid-19 entered the equation.

Dr Ogolla is a PhD student at the University of Nairobi where he is undertaking a research in emerging and re-emerging zoonotic viruses in small mammals in collaboration with the University of Helsinki, Finland. It was during this doctoral study that Dr Ogolla won a six-month travel grant to do his lab work in Helsinki University in Finland.

He said goodbye to his family and promised to return after the six months of lab work. However, by the end of 2019, Dr Ogolla still had most of his work unfinished; this forced him to seek extension for another six months. This he was granted; however, it was during this extension that Covid-19 started ravaging the world.

Finland reported its first Covid-19 case in February 2020 and immediately imposed a ban on air travel and put in place a curfew for locals. "Following the pronouncement, the streets were literally deserted. I must say the Fins have trust in their government and take seriously any government directives," Dr Ogolla told Animal Focus Magazine. "It became very lonely; the university closed and I couldn't do much during this period that lasted for three months," he adds.

Restaurants, churches and other places of worship were closed down in an effort to reduce the spread of the disease in Finland. After three months the curfew and other movement restrictions were lifted. Unfortunately, the lifting of restrictions served to increase Covid-19 cases and ushered in a second wave which was more lethal than the first and many people tested positive. The second wave in Finland climaxed in September and October 2020.

"We lived in students' apartments; here we shared a common kitchen and it was not uncommon for us to meet with fellow students along the corridors and kitchen. I strongly think that was how I got infected," Dr Ogolla recalls.

However, his Covid-19 journey traces back to that cold morning when he had a knock on his door. It was one of his fellow students who lived on the same floor and with whom they had interacted regularly. He was there to inform him that he had tested positive for the Covid-19 a day before. One day later on a Saturday Dr Ogolla suffered a flu like infection but quickly pushed it a side thinking it was a common cold. That day he went out to jog in order to heat up the body in an effort to fight off the cold. He was mistaken.

"We lived in students' apartments; here we shared a common kitchen and it was not uncommon for us to meet with fellow students along the corridors and kitchen. I strongly think that was how I got infected.."

The following day which was a Sunday, he experienced a weak body and the flu signs persisted. For the first time he thought it could be Covid-19; so, on Monday morning he called the Ministry of Health in Finland through a hotline provided. He

Dr Ogolla in Helsinki, Finland

was quickly scheduled for a test the same day and two days later he received results that he had contracted Covid-19.

It was not a good experience at the time considering the stigma that was steadily growing around the disease especially back at home. But he had to inform his wife who as expected got disturbed. They agreed to keep the children in dark at least to prevent the emotional torture that could have followed.

"I remained indoors and on the seventh day after confirmation of the diagnosis, I lost my sense of smell; but I continued taking vitamins (Vitamin C and D) and paracetamol to manage the pain. By the tenth day I started feeling better and regained my sense of smell. Mandatory quarantine was 10 days but I extended my stay at home to 14 days. To be sure I was fully recovered, I went for 10km run on my 15th day and I felt everything was well with me," recounts Dr Ogolla.

There was no second test, but as requirement by Kenyan government I took another test one month later when I was travelling back home and it was negative."

Despite getting healed Dr. Ogolla could not still travel back home since he had not finished his lab work and even he had finished the skies were still locked. Dr. Ogolla travelled back in November 2020 to a warm reception by his family.

Meet The COVID Myth Buster

After a long hunt for Dr Nanyingi on the day of the appointment, I get him at Lake Naivasha Country Club in Naivasha. He was facilitating a one health multi-sectoral workshop on Tripartite Joint Risk Assessment of COVID-19 in Kenya that aims to strengthen capacities to address negative impacts of COVID-19 at the human-animal-ecosystem interphase.

Dr. Mark Nanyingi is a well decorated and sought after infectious disease epidemiologist, public health practitioner, an assistant professor and above all, a veterinarian.

Post-doctoral fellow

Currently, he is Soulsby One Health Postdoctoral Fellow researching on emerging and re-emerging zoonotic diseases and the country ambassador for the Royal Society of Tropical Medicine and Hygiene (RSTMH) in Kenya. He also doubles as a post doc at School of Public Health, University of Nairobi and at the Institute of Infection and Global Health, University of Liverpool under the One Health Regional Network in the Horn of Africa (HORN) project. As a One Health expert, he provides technical support to FAO-ECTAD (Kenya), WHO-AFRO and scientific advice on zoonotic diseases policies to the government of Kenya via ZDU. I had to drop down some of the feathers on his cap to ensure I do not make you look bad and feel funny. You are my reader, so you are doing just fine. That's sufficient achievement.

Pathogen hunter

Daktari refers to himself as a pathogen hunter and science diplomat – this is by virtue of his vast field experience and mentorship programs that he runs by empowering young scientists to develop concepts for funding and carry out research in the human – animal inter phase for a better world. He was on his normal business until the pandemic struck. COVID 19 was here wrecking havoc all over the place with insatiable appetite to affect as many countrymen as was possible. A war with an invisible enemy was declared. And just like any other wars, the fuel for war had been ignited – propaganda. This was coupled with myths and rumors. Sadly in this era of social media and negative energy,
propaganda and half truths spread faster than facts and truths. Indeed this could be the reason Tiktok seems to have overtaken the good gospel and is cross cutting across all barriers of human interaction.

Dr Mark Nanyingi

Combating misinformation

Fear mongering and lack of information were soon emerging as the core enemies to combating the new virus and a gap was quickly emerging. This had to be filled since the wise men had unintentionally warned us that nature abhors vacuum. As an infectious disease epidemiologist, and Public health practitioner, Nanyingi had his job

.....Fear mongering and lack of information were soon emerging as the core enemies to combating the new virus and a gap was quickly emerging.....

Dr Nanyingi at work in the laboratory

well cut out. Go out, bust myths, demystify rumors and provide access to the right information in a timely and fashionable manner. Indeed he delivered this with military precision.

Scientific advice

Through his platform as the RSTMH ambassador, he volunteered to provide proper scientific advice on COVID-19 evolution in Kenya. This was given to government agencies as well as to the general public through print and audiovisual media outlets. No one knew more about COVID 19 by the time it landed in Nairobi Kenya on the 12th March, 2020. The only available information was how COVID-19 had behaved in other populations across the globe. It was time to practice and apply science.

Dr Nanyingi worked with experts at WHO-AFRO to simulate predictive models for COVID-19, these were used by various agencies in decision making on mitigation of the pandemic in Africa. This is because it takes time to get real time data about what is happening in such times as in a pandemic. For this reason, predictive models were useful in helping authorities prepare and respond. They provide insights into what might happen. Indeed some of these models were used to make decisions such as quarantines, bans on public gatherings and when this was to be lifted.

It was time to fuse hard science with a real time occurrence in life. All Kenyans on social media had become disease experts overnight and misinformation was the order of the day. Huge terminologies became sweet on our tongues and it seemed like a competition on who landed the latest jargon and shared it first on social media would be spared by the virus. In this frenzy, political commentators and all manner of professionals threw around terms "Flattening the curve", "Herd immunity" among other epidemiological principles they knew so little about. It was time to unearth this kind of science to the public be the voice of reason, preach on proven disease control measures and ensure this forms the basis of interaction and action among the public.

TV Interviews

This is how in the heat of the pandemic, Daktari graced your living rooms shuffling from one station to another and definitely struggling with the Swahili language. During this interview, I confirmed his dental anatomy is still intact. By the time he chose to take a break, he had been to over 20 local and international interviews and turned down a tone of others.

In the confusion of the pandemic, one saddening

thing that still worries the good doctor to date is the misinformation by the media. A challenge that media personalities face whilst reporting on technical matters and COVID 19 was a hotbed of such. The media misquoted him on his statements that would end up being far from what his intended communication was as well as being quoted on nonexistent submissions and speeches. As this happened, the government has its ear on the ground. The political class was looking for scapegoats and information given to the public would be interpreted as going against government efforts or supporting government fight the pandemic. This made him worried about politics of science and political correctness over the government stands and views on the pandemic.

Africa would miss the bullet

Despite being an accomplished scientist and being good at his thing, some quarters in the local and global scene did not trust outputs from Daktari and his teams. When they opined that Africa would "miss the bullet of COVID-19" their counterparts from developed world were pessimistic, which summons his passion that Kenya and Africa has leading scientists who can authoritatively communicate to the world on science matters.

Nanyingi asserts that from all indications, Kenyans and the world can see that COVID 19 is here to stay and the damage has been felt first hand. He cautions that the public has to be on alert and stay safe as the disease fades into endemic levels where many have been infected and the bodies have mastered on how to deal with the infection even without vaccinations.

Collaboration key

He stresses on multisectoral collaboration under One health with the vets as leaders in zoonotic disease joint preparedness, surveillance management and mitigation of their spread to avert future pandemics. He is excited as a visiting scientist to ILRIs newly established One Health Research, Education and Outreach Center (OHRECA) which is led by a veterinarian.

He reckons that there may be another pandemic in the horizon "Disease X" and the human race needs to adjust and adapt to the ever changing dynamics of human-animal and environmental interactions that enhance drivers of new pathogens. The world therefore needs to prepare and counter such when they occur. The only key to ensuring pandemics are kept at bay is joint preparedness, detection and response efforts.

(By Dr. Moses Olum – mosesolum@gmail.com)

SARS CoV-2 IN ANIMALS

Evidence to date from the few domestic animals that have tested positive for SARS-CoV-2 indicate these infections are typically a result of close contact with people with COVID-19.

Infected pets

In many countries, dogs and cats have tested positive for the coronavirus or antibodies have been shown in these pets, indicating a previous infection. Various studies show that dogs and cats can be infected with SARS-CoV-2 if they are in contact with a COVID-19 positive person.

The first confirmed reports of pets infected with SARS-CoV-2 came from Hong Kong. This was in two dogs and one cat. The pets did not develop clinical signs and they eventually turned negative. One ferret was reported positive for SARS-CoV-2 in Slovenia. It is most likely that the virus was transmitted from humans to animals. No indications have been found that indicate that humans were infected by their pets. To date, the virus has not been detected in other livestock other than the above mentioned.

Infected zoological animals

Several animals in zoological facilities have tested positive for SARS-CoV-2, including large cats and great apes. A tiger and lions were said to have tested positive for the coronavirus at the Bronx Zoo in New York. Further, a puma in South Africa, snow leopards in a Kentuck zoo and gorillas at a California zoo also tested positive. It is suspected that these animals became sick after being exposed to zoo employees with COVID-19. This is despite the staff following COVID-19 precautions.

Infected mink

SARS-CoV-2 was reported in mink on farms in multiple countries including the United States, Netherlands, Poland and Denmark. Infected workers likely introduced SARS-CoV-2 to mink on the farms, and the virus then began to spread among the mink. Once the virus is introduced on a farm, it can spread between mink as well as from mink to other animals on the farm.

General hygiene measures in animal care facilities

These measures also apply to veterinary clinics;

- Do not allow pets to lick your hands.
- Wash hands immediately after contact with animals, their food or faeces.
- Wash your hands often with water and soap for at least 20 seconds, especially after going to the bathroom, before eating, after blowing your nose, coughing or sneezing, and in between clients/patients.
- If soap and water are not available, use an alcohol-based hand sanitizer containing at least 60 per cent alcohol.
- Provide disinfectant, wipes and tissues in all research locations, meeting rooms, toilets, break rooms and other communal areas.
- Refrain from touching your eyes, nose and mouth with unwashed hands.
- Cough and sneeze in your elbow or use a tissue to cover your nose and mouth and dispose of the tissue immediately after use.

COVID-19 patients and farm animals

Farmers infected with COVID-19 are advised to:

- Avoid contact with their animals.
- Refrain from visiting the stables and bomas
- Delegate the care for the livestock to others

COVID-19 patients and their pets

People with COVID-19 are advised to:

- Avoid contact with pets as much as possible including petting, snuggling, being kissed or licked, and sharing food or bedding
- Have another member of your household care for your pets while you are sick;
- If you must care for your pet or be around animals while you are sick, wear a mask and wash your hands before and after you interact with them.

Dogs and cats have been found to get infected by SARS-CoV-2 from humans.

•Keep their pets inside the home during their quarantine and isolation period as much as is possible. This advice may be difficult to follow when the pet mainly lives outside.
•Avoid sharing dishes, drinking glasses, cups, eating utensils, towels, or bedding with other people or pets in your home.

Other appropriate practices include:

•Limit or prevent pets interacting with people or other animals outside the household.
•Walk dogs on a leash, and maintain at least 1 meter social distance from other people and animals.
•Avoid public places where a large number of people and dogs gather.

Vaccines and tests

There are currently no vaccines available for animals infected by coronaviruses that cause respiratory infections. Vaccines against coronaviruses that cause gastrointestinal infections are available for various species of animals. Still, these are species-specific vaccines against enteral coronaviruses. These are not meant for SARS-CoV-2.

Tests are available for testing dogs and cats for the coronavirus. However, these tests check for the coronaviruses responsible for gastrointestinal infections and are not suited for testing humans. Furthermore, these tests are not designed for SARS-CoV-2.

.....dogs and cats have tested positive for the coronavirus or antibodies have been shown in these pets, indicating a previous infection. Various studies show that dogs and cats can be infected with SARS-CoV-2 if they are in contact with a COVID-19 positive person. No studies have shown transmission of SARS-CoV-2 from animals to humans .....

Covid-19 Pandemic and Foods of Animal Origin Safety - The Connection

Joe, a pastoralist beef farmer has traditionally walked his three-year-old Sahiwals to the nearest animal market for sale. This has been his main economic activity over the years. Occasionally some animals presented to the market failed to get a buyer resulting in him walking them back home, a distance of over 10 kilometres. This is after exposing them to all sorts of infection,fatigue and stress.

Biosecurity

However lately due to Covid-19, the farmer has adopted technology and only sells his cows on order directly from his farm. Additionally, he has instituted a disinfectant foot bath at his gate for all traders visiting to purchase his cattle. While protecting himself and others from Covid-19 by keeping away from crowds, he has also prevented his animals from contracting other infectious diseases that would compromise on the safety of beef. By not walking his animals for long distances, he has improved the quality and ultimately safety of beef from his sahiwals.

Such actions of keeping infections at bay by simply putting disease preventive measures (biosecurity) will go a long way in ensuring the safety of the beef products derived from his animals. Other measures that he has instituted include proper animal nutrition which will result in enhanced immunity and therefore reduced antibiotic use and residues. In so doing his sahiwals will be healthy and will consequently provide safe and better quality beef.

Slaughter house chaos

At the local abattoir where Joe's sahiwals are slaughtered, operations are significantly different.

A holding ground in a slaughterhouse

Carcasses at a slaughterhouse - hyginene is paramount

The chaotic scenes that usually characterise the abbatoir are a thing of the past. No more crowding, only a few flayers and butchers are allowed in and hand washing and sanitizing is now the modus operandi. The animal market near the abattoir is non-operational and therefore there is no more hawking. By adhering to a strict set of rules and directives, the butchers and flayers have not only reduced the risk of contracting Covid-19 but also reduced chances of contaminating beef and by-products with other food borne infectious agents thus ensuring meat safety.

Licenced meat transporters are usually the ones who ensure that the beef is delivered to various retail outlets. It is important to note that beef, just like many other foods of animal origin such as milk, mutton, pork, has a short keeping time. As transporters keep to designated working timelines and geographical boundaries due to Covid-19 regulations, they are indeed also helping in delivery of fresh food to the consumers thus ensuring safety of those foods. Because of the timelines for the delivery of meat for example, what materials can transport meat and how far it can be transported is defined in existing laws for purposes of safety, adherence should continue even after the pandemic. Simple actions like regular hand washing and sanitizing that were often overlooked previously have indeed become a norm courtesy of Covid-19.

Outlets

Retail outlets like butcheries and supermarkets where Joe's animal products end up are now a lot more conscious of meat handling hygiene, meaning a lot of consumers could be protected from food borne infections which usually occur due to unhygienic handling. Other value chains, for example that of milk, will also benefit from hygienic handling at the point of dispensing. This is more so in informal markets where hygiene has been a challenge.

Considering that the food safety of products such as meat, milk, mutton and so on, is a factor of cumulative controls along the value chain from the farm (producer) to the fork (consumer),it is imperative that hazards of whatever nature must be prevented at all cost with or without a pandemic.

Guidelines

The farmer should ensure that his animals are healthy by adhering to good agricultural practices such as vaccinations, observing biosecurity measures, engaging registered animal health professionals for extension and clinical services as well as providing proper nutrition.

Movement of animals should only be done after certification by government authorities that animals are free from diseases.

Processors and other players in the foods of animal value chains should ensure that they operate within the requisite laws inorder to safeguard the safety of the consumer. This is more so because the popular adage, 'Health is Wealth', cannot be over emphasized during and after Covid-19 pandemic.

Writer: Nazaria Nyaga (Veterinarian involved in foods of animal origin value chains)

A CASE WE NAILED

It was a bright Monday morning, 8:29a.m, to be precise. The day and week were full of promise. I was just arriving at the veterinary clinic to start the day off. As I passed through the reception area, I saw our amiable, ever-present receptionist, Mary talking over the phone. She waved at me and then quickly scribbled something on the creamy notepad. "Alright, Dr. Brenda has just stepped in, you may speak to her." Mary said handing me the phone.

"Hello. This is Dr. Brenda," I said as I stepped into the consultation room. This particular consultation room also doubled-up as the clinic office. It was a modest, book-lined office. On one wall hang three charts, each colorfully displaying the cats, dogs and horses of the world. The wall opposite was decorated with four black and white printed veterinarian cartoons.

"Hello. Habari," Greeted the voice on the other end of the line.
"This is Ngetich, the farm manager, Lengai Farm."
"Oh, Mr. Ngetich, we haven't heard from you in a while," I responded as I looked at the client records on Odyssey, the clinic management information system. "How can we be of assistance to you today?" I enquired anxiously.
"This morning we awoke to find our best milker, Chemaluk, limping," Ngetich continued.
"How was she yesterday?"
"Quite well. Feeding as usual, produced her usual 56 litres and was not limping."
This required a visit to the farm immediately.
"Ok, we will come by within the hour," I informed Ngetich as the probable causes of the lameness flew through my mind.

"Sawa, Daktari," He thanked me as we both hang up.

Forty-five minutes later, Mutuma, my faithful clinic assistant and I, in our silver metallic 2010 Toyota Probox Wagon F were at the farm gate. It was an imposing, old-fashioned wooden gate with a brown, rustic sign that read "Lengai Farm", on it. The security warden immediately recognized us and swung the gate open.. We drove in on the murrum road towards the farm manager's office. On one side of the road, and as far as the eye could see was a sea of the straw - colored Rhodes grass. The farm grew its own supply of hay. On the opposite side of the road was a fenced enclosure with a herd of black and white cattle. Holstein-Friesians. Some grazing contentedly on the pastures, some crowding at the concentrate troughs and others lay leisurely chewing cud. They totaled 143 drove of cattle, including the calves in the calf-pen opposite the manager's office.

As our probox ground to a halt, Mr. Ngetich strode hastily towards us. He was a heavy-set man, with angular facial features and a warm smile. He was in his characteristic cream dust coat with the farm's logo, a cow head silhouette, on the breast pocket.
"I am glad you are here Daktari." He remarked, heartily shaking my hand and then Mutuma's.
"Chemaluk is already restrained in the crush." He said leading us to where the ailing animal stood weakly.
On seeing Ngetich, Chemaluk let out a feeble bellow, as if to ask for help.
"So which leg is affected?" I asked Ngetich as I began the general physical examination on the cow.
"The right hindleg." Came the reply.

Cows in a paddock. Such paddocks should be routinely checked for harmful objects such as nails, pieces of metal or wood, etc, and the same removed for the safety of the animals.

The general physical examination on Chemaluk revealed an animal with a dull demeanor and an elevated temperature at 39.6C°. The lower right hind-limb was warm and tender to touch and the pre-crural lymph nodes, the lymph nodes at the flank region, were slightly enlarged.

"We need a closer look at that hindlimb Mutuma," I instructed. I needed to examine the plantar surface, the under-side, of the hoof. Mutuma was a highly experienced assistant and he knew exactly what to do. With his back against the back of Chemaluk, Mutuma raised and folded the cow's limb at the fetlock joint. In this stance, the under surface of the hoof was turned upwards, exposing it for further examination. Being an uncomfortable position for the animal, I did a quick examination of the area.

I saw a silver, glistening and circular object on the sole or middle of the hoof. I touched the object. It felt hard and was firmly lodged in the hoof. I looked closer, Lo and behold! "There is a nail lodged in her hoof. "I revealed. "A nail?!" Exclaimed Ngetich who had been quietly observing the case management. "No wonder the dullness she displayed," he added. At this time the cow was starting to struggle. "Let go the limb Mutuma, let her rest a while and then we will have another go at it to remove that nail," I instructed. In the course of our brief break, I selected a few surgical instruments for the nail removal. I also drew a sedative, antibiotic and painkiller in three different syringes for our patient. I proceeded to administer the sedative for standing sedation, meaning that the effects of the drug would not cause the cow to lie down, but would remain standing. A few short minutes later, the drug took effect.

"Mutuma, raise the limb again," I told him, readying myself with a pair of curved surgical forceps. With the limb up and less struggle from Chemaluk now, I grasped the head of the nail and pulled. I felt the nail dislodged and yield. I pulled harder, this time the whole length released to reveal a 2 inch nail! "Great work," Shrieked Ngetich as he clapped thunderously.

"This was the cause of the lameness," I announced holding up the brand-new-looking nail.
Mutuma dipped the limb in disinfectant solution, having completed a thorough clean with plain water. I finished - up the treatment with the antibiotic and painkiller jabs. "She will be well in a matter of days. Keep an eye on her and if she deteriorates, call the clinic," I advised Ngetich. He nodded, still bewildered by the nail-in-limb occurrence.

"Finally, make sure to discard, or pour-out the milk from this cow for the next one week," I directed. "The milk produced in the next one week will contain drugs that we do not want to enter the human food chain."
"This is duly noted," Ngetich replied.
We bade Ngetich good bye as we hopped into our probox and sped-off to attend to a drift of pigs in the adjacent farm.

Dental and Oral Care in Dogs

By Dr. Isaiah Nchagwa Chacha
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Introduction

Our pets should be comfortable at all times for us to enjoy their companion and love us back in return. Dental and oral care in dogs is an aspect that is more often ignored by pet dog owners yet the mouth is a critical port of entry of food and other material to the body hence a determinant to disease/un-comfort or perfect health.

Teething in dogs

As it is with humans, dogs will first develop milk teeth which are also known as primary teeth, needle teeth, baby teeth or deciduous teeth. They will then fall off to grow another set of teeth which are the permanent teeth, adult teeth or secondary teeth. Puppies are born without any visible teeth. The deciduous teeth start erupting at the age of three weeks. The incisors will grow first followed by canines and by the age of six weeks, all the 28 deciduous teeth will have grown.

A teething puppy chewing on a paint brush and an old shoe

At around the age of 3.5 months to 4 months, the puppies will shed their deciduous teeth starting with the incisors to grow another set of 42 permanent teeth. The milk teeth will fall off or will be swallowed without any harm to the puppy. A keen owner may notice slight blood stain in the puppy's mouth or on a toy the puppy had been chewing. The puppy will have all the adult teeth at the age of between 6 months to 8 months. The adult teeth begin developing from the tooth buds located on the upper and lower jaws long before the deciduous teeth fall off. As they erupt, they exert pressure on the deciduous teeth and cause resorbing of the deciduous teeth's root which leaves the crown to fall off. The crown that falls off will mostly be swallowed by the puppy when eating with no any ill effect nor in-

Dr Chacha carries out dental scaling procedure

jury. At this time, the puppy will keep drooling and may express dull demeanor, slight inappetence and reduced activity due to irritation.

Chewing habit during teething

During teething, puppies just like babies usually have an itchiness to bite and chew. They bite and chew on almost all manner of things including furniture, shoes, stones, clothes etc. It is important to present appropriate and safe objects or intended toys for them to chew and play with. Keep off valuables and warn the puppy against items like shoes, furniture, mobile phones, electronic gadgets so as to avoid damage of these valuables and the puppy's teeth. Also avoid feeding bones as the teeth are still delicate and can easily be traumatized and cause gastrointestinal complications if swallowed.
When the adult teeth are erupting, there is usually a foul odor in the puppy's mouth for keen owners to note. This foul smell is normal and should raise no alarm.

The myth

In our African setting, it is widely believed that when a puppy swallows the shed deciduous teeth, they will injure the gastro-intestinal tract (stomach and intestines) and thus cause bloody diarrhea and vomiting, the puppy totally loses appetite, wastes rapidly and dies within about three days. In Kenya this belief is described as 'ugonjwa wa meno' meaning the teeth disease.
This is not true; the clinical signs described are exactly of a disease called Canine Parvo Virus (CPV) which usually affects puppies that are not vaccinated against the disease. The puppies get CPV between the ages of 2 months up to 10 months old. This period of puppy development coincides with the teething stage and thus the association.

Persistent tooth

Sometimes the deciduous or baby tooth may fail to fall off upon eruption of the equivalent adult tooth at the same position. This causes crowding and malposition of teeth in the mouth. The downside effect is difficulty in chewing, frequent gum and soft tissue injury, predisposition to dental and oral diseases such as gingivitis, periodontitis and interfered jaw movement. This can be corrected by a qualified veterinarian by extracting the baby teeth to create space for the permanent teeth full growth and functioning.

In my practice, the most commonly persistent teeth observed are the upper canines, followed by the lower canines then incisors. The observation is biased towards small breeds of dogs mostly brachycephalic (with short noses) as opposed to the medium and large breeds of dogs.

Dental care during teething

It is important to observe your puppy's mouth and teeth at least every 2 weeks especially between the ages of 3 months to 8 months to check for persistent deciduous teeth, un-associated bleeding, wounds and signs of disease or irritation. Also schedule vet

← *Dog with tartar before dental scaling*

Dog with tartar after dental scaling →

visits monthly during this period for specified dental and oral care. This can be done together with the vaccinations schedule (against CPV, DHLP, Rabies and deworming) and grooming can be done to include mouth cleaning and teeth brushing with the general assessment of dental and oral development.

Signs of oral and dental disease

Over time, food particles accumulate between the teeth of dogs and this leads to development of sticky particles on the teeth called dental plaque. The plaque attracts bacterial proliferation which causes periodontal disease (periodontitis). If the plaque is not checked in time, it hardens to cause tartar which also leads to infection of the gums (gingivitis). At this stage, the dog experience the following signs of poor dental health which include; awful breath, broken/loose or missing teeth, drooling, reduced appetite or chewing with difficulty, dental discoloration, visible tartar on the teeth, frequent pawing at the mouth, bleeding from the gums among others.
These signs of dental disease can affect other body organs or cause general systemic disease.

Canine oral and dental treatment

To avert disease and conditions associated with the teeth and mouth of the dog, ensure at least weekly brushing of the dog's teeth and mouth cleaning. This can be done at home by the dog owner. However, the procedure should be guided by a veterinarian including recommendations of the precise dog toothpaste (human toothpaste is harmful to dogs) and toothbrush that is appropriate to the dog's size and age.

In cases of dental plaque or tartar, dental scaling is performed by a veterinarian. This is done under general anesthesia as the dog will not stay still and cooperate. In this procedure, a dental scaler machine is used to clear all the tartar and plague on the teeth to retain its original white color and hygiene. The loose, broken and worn out teeth are extracted when deemed necessary by the veterinarian to alleviate constant pain and discomfort. Where there is disease like gingivitis, periodontitis, ulcers, stomatitis and other, the dog is treated and a review may be recommended in addition to planned home care medication.

World Antibiotic Awareness Week 2019: A look back

By Dr Kelvin Momanyi
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Antibiotics are an essential part of treating human beings and animals; from the child who needs antibiotics to treat an infection from a graze in the knee, the elderly person who needs antibiotics after a knee replacement surgery, to the sick cow in a farm that needs treatment. As Rudi Eggers, the World Health Organization (WHO) representative in Kenya says, 'antibiotics are an essential part of our health and we cannot do without them.' But antimicrobial resistance (AMR), which results from the overuse and misuse of antibiotics in both human and animal medicine, has led to a growing number of bacteria in humans, animals and the environment, that are resistant to antibiotics.

Antimicrobial Resistance is now a serious global threat of increasing concern to human and animal health. Antimicrobial resistance happens when microorganisms (such as bacteria, fungi, viruses, and parasites) change and become resistant to antimicrobial drugs (such as antibiotics) to which they were originally susceptible to. Microorganisms that develop resistance to most commonly used antimicrobials are referred to as "superbugs". The continued rise in antimicrobial resistance globally has led to 10 million people dying every year and will also account for 3 percent reduction in Gross Domestic Product (GDP) by 2050. Drug-resistant bacteria is thought to kill one person every minute, leading to a global annual death toll of 700,000 people. This number is expected to rise to nearly one million by the year 2050. Data from sentinel sites in Kenya indicate high rates of resistance for respiratory, enteric and hospital acquired infections indicating that many available antimicrobial regimens such as penicillins and cotrimoxazole are unlikely to be effective against common infections. In livestock, antimicrobial resistance has been reported in E. coli isolates from beef and poultry showing resistance to common antimicrobial agents such as tetracycline, cotrimoxazole, streptomycin, ampicillin, quinolones and third generation cephalosporins at varying frequencies.

Antibiotics have served as the cornerstone of modern medicine. However, the persistent overuse or misuse of antibiotics and exposure to falsified drugs in human and animal health have encouraged the emergence and spread of antibiotic resistance. Antibiotics are used in both human and animal health to treat various infections, and health professionals (both human and animal) have raised concern over their availability over the counter, and the misuse of the drugs. This is one of the leading causes of resistance. Other causes are lack of access to quality healthcare for both humans and animals, and frequent movement of persons and livestock. It is against this backdrop that Kenya hosted Africa's first Antimicrobial Resistance Awareness Week that aimed to increase global awareness of antibiotic resistance and to encourage best practices among the general public, health (animal and human) workers and policy makers to avoid the further emergence and spread of antibiotic resistance.

The Kenyan government has commemorated the world antibiotic awareness week (WAAW) since 2013 with calls for urgent action to avert antibiotic resistance. In 2013, the Kenyan Ministry of Health and the Ministry of Agriculture, Livestock and Fisheries embarked on a process of consolidating efforts to implement

....Antibiotics have served as the cornerstone of modern medicine. However, the persistent overuse or misuse of antibiotics and exposure to falsified drugs in human and animal health have encouraged the emergence and spread of antibiotic resistance...

sustainable measures that can mitigate AMR risks. To take a lead on the African continent to combat AMR, the ministries jointly developed the antimicrobial resistance Policy and National Action Plan and a Communication Strategy through a One Health approach. The national policy for the prevention and containment of AMR and the National Action Plan for the prevention and containment of AMR translate into preventative actions on the ground. The AMR Communication Strategy aims to sensitize different audience groups across relevant sectors on reducing AMR.

The 2019 WAAW marked a symbolic year as this joint campaign demonstrated the African solidarity amongst key AMR stakeholders in the region. This is the first time WAAW is celebrated at a regional level, and it is also the first time for the Regional Tripartite (FAO, OIE, WHO) and African Union (Africa CDC and AU IBAR) to jointly organize WAAW. To raise awareness and promote good practices throughout the society in Africa, the Africa Tripartite One Health Regional Coordination Group, the African Union (AU), and the Regional Economic Communities in collaboration with the Government of Kenya and members of Kenya AMR Secretariat, joined forces to celebrate the first Africa Regional World Antibiotic Awareness Week (WAAW), under the global theme 'Handle Antibiotics with Care' and national theme, "Tackling antimicrobial resistance together." This year's global theme emphasized the need to use antibiotics safely and responsibly across sectors, from agricultural and livestock production to public health, and to mitigate the impacts of antimicrobial pollution contaminating water and soil.

The event was aimed at uniting the AMR stakeholders to strengthen their commitment and advocacy efforts towards AMR risk mitigation. By engaging a wide range of stakeholders and audience, WAAW envisions to raise awareness on AMR issues to the general public to create a holistic awareness throughout our society.

The week-long event highlighted the importance and the urgency of the impacts antimicrobial resistance has on humans, animals, and our eco-system. To reach out to different AMR stakeholders, including farmers, students, journalists, and regional policy makers, WAAW rolled out different regional, national or joint events throughout the week. The events included a press conference, high-level advocacy event, coordination meeting, farmer field day, symposium, a student photo-essay and live skit competition with One Health students' clubs in Kenya and an industry AMR sensitization workshop.

Media training

A half-day World Antibiotic Awareness Week 2019 media sensitization and training was held on 15th November 2019 at the CGIAR AMR Hub at the International Livestock research Institute (ILRI) jointly with Kenya's ministries of Health and Agriculture, Livestock, and Fisheries hosted, at the ILRI campus in Nairobi. The event was a curtain-raiser to the official launch of WAAW regional AMR awareness activities in Kenya. Twenty-five journalists from a cross section of Kenya's media houses and magazine publishers attended the event and were joined by key speakers and observers from the Ministry of Health, the Directorate of Veterinary Services, the

Figure 1: A group photo of the media training participants held at ILRI, Nairobi

Kenya Medical Research Institute (KEMRI) and the University of Nairobi (UoN).

High-level advocacy event and press briefing

This was a one-day press briefing and advocacy meeting held on 18th November 2019 at the Laico Regency Hotel. The high-level advocacy event involved gathering of 200 AMR stakeholders to strengthen commitment to support National Action plans (NAPs) implementation in African Countries. Panel discussions and a signing ceremony took place to demonstrate the political will to enhance advocacy efforts.

Antimicrobial Resistance was identified as a classical One Health problem because it has to be addressed at both human and animal sectors; it requires collaborative and coordinated action cross-countries; and it requires the public to change their attitudes, behaviour and practice. Public education, awareness and sensitization on the right use of antibiotics is paramount in waging war against misuse of antibiotics therefore stakeholders called on the need to enhance regulatory frameworks to control access.

Figure 2: Stakeholders after signing the postcard as a re-commitment to mitigate AMR

Farmers field day

Farmers field day event was a one-day event was held at the Ndumberi stadium on 20th November 2019 and reached 427 participants. The event was purely a farmer's opportunity to learn about responsible use of antibiotics and the connection to human health. This event also attracted government officials who committed to supporting farmers to improve their farming systems for productivity. Different stakeholders took the opportunity to exhibit their products/services and trained the farmers about interlinkages between misuse of antibiotics and emergence of antimicrobial resistance.

Figure 3: Participants in the AMR march holding the event banner outside the County Government of Kiambu HQ

AMR symposium

The symposium was a two-day event organized by the Biomereux as from 21-22 November 2019 held at Crowne Plaza for researchers and academics to exchange the most updated information on antimicrobial resistance.

Dr Muinde, a Research Manager at the World Animal Protection, presentation on animal welfare and antimicrobial resistance emphasized the critical role of consumer power and their role to voice their concerns to catalyze transformative change that safeguards human, animal and environmental health.

Student photo-essay and live skit competition with One Health students' clubs in Kenya

A one-day student activity, themed, "what would the future be if antimicrobial resistance got worse?" was held on 23rd November 2019 at the Kenya National Theatre bringing together over 200 students from One Health student clubs across the country to celebrate the One Health spirit and raise awareness on the urgency of AMR issues and the importance of individual's role from different sectors. The student event was marked with presentations, mentorship speeches by guests, music performances, live skit performances and awarding of the top essay winners. The activity was led by the World Animal Protection (Africa) in partnership with the Tripartite, ReAct group Africa, and BD.

Figure 4: Dr Patrick Muinde, World Animal Protection

Figure 5: A group photo of all the participants during the student event at Kenya national Theatre (Photo-FAO)

The storytelling/Photo Essay Contest was aimed to raise awareness about antimicrobial resistance (AMR) and its risks highlighting how the future will be like if antimicrobial resistance is not tackled. The challenge was to capture what the future will be like if AMR is not tackled through a camera lens and accompanying story.

Rinderpest — eradicated, but should not be forgotten

By Dr. Samia Metwally

What is rinderpest disease?

Rinderpest was a devastating disease of domestic and wild animals. It took decades of concerted eradication campaigns, at global, continental, regional and national levels to control, prevent and eventually eradicate it. Interventions included vaccination, disease surveillance, advocacy and awareness creation. In 2011 rinderpest was declared eradicated from the globe. However inasmuch as the disease is eradicated from its natural habitat is should never be forgotten. It is for this reason that FAO and OIE has established a post rinderpest eradication program to keep the globe awake and aware.

Upon the declaration of eradication in 2011, FAO member countries agreed to maintain world freedom from rinderpest and approved the destruction or sequestration of all remaining Rinderpest Virus-Containing Materials (RVCM). The goal was to reduce risks through inadvertent or malicious release.

Rinderpest infections occurred in cattle, free-ranging African buffalo, eland, kudu and warthog, Africa in bongo, bushbuck, bush pig, chevrotain, dik-dik, duiker, giant forest hog, giraffe, sitatunga and wildebeest, and in Asia in banteng, blackbuck, gaur, nilgai and sambar. Although, recovery from an attack of rinderpest confers a lifelong immunity to the disease, unfortunately only a few animals are known to survive.

Historic Perspective

Rinderpest was probably introduced into the Horn of Africa in late 1880s and caused severe outbreaks in sub-Saharan Africa. The resulting panzootic swept north to the Mediterranean, west to the Atlantic and south to the Cape of Good Hope, permanently changing the flora and fauna of the continent. It burnt itself out in southern Africa in the early 1900s, but lingered on in northern equatorial Africa until the late 1990s.

Early attempts to immunize cattle artificially were unpredictable and often disastrous. The discovery in Russia in the late nineteenth century of the protective powers of serum drawn from a recovered animal, led shortly thereafter to the development in South Africa of the serum-virus simultaneous immunization method. The method was common for nearly 35 years. As the source of the virus for immunization was the blood of an infected ox, the risk of inadvertently injecting other bovine pathogens was high. The development of an attenuated goat-adapted virus that could be injected alone into cattle without serum was a major breakthrough towards an effective vaccine against rinderpest.

How the battle Against Rinderpest was won?

The devasting effects of rinderpest awakened research into an effective vaccine. The development of freeze-drying technique in the late 1930s came as a shot in the arm in the improvement of the rinderpest vaccine. With an effective vaccine mass vaccination at national and continental levels followed. Through these vaccination campaigns the disease was significantly reduced to its lowest levels in 1976. Actually by 1976 rinderpest disease was present in only three countries.
An awareness and advocacy campaign targeting farmers, veterinary personnel and the general pub-

lic ran alongside mass vaccination campaigns. The goal of awareness creation campaign was to educate the public and raise their risk perception index of rinderpest and subsequently timely reporting for quick intervention. The advocacy campaign served to win the goodwill from policy makers and thus necessary support from governments.

Kenya is among the countries that are working towards maintaining the rinderpest freedom. Kenya carried out a tabletop simulation exercise on rinderpest to assess its readiness to tackle an outbreak.

What is FAO doing now?

Establishment of Post-Rinderpest Eradication Secretariat

FAO is leading the process of reducing the number of laboratories keeping the virus by advocating for and offering assistance to destroy or relocate it to highly secure FAO-OIE rinderpest holding facilities. In June 2012, a moratorium on handling the virus was issued after a FAO-OIE survey found that the virus continued to be held in more than 44 laboratories worldwide, often under inadequate levels of biosecurity and biosafety. Today most of the RVCMs have been destroyed or sequestered . Kenya is among the countries that sequestered their RVCMs.

Joint Advisory Committee

Joint Advisory Committee (JAC) provides scientific advice on rinderpest management and biosecurity for the post-eradication era was formed in 2012. It is supported by FAO and OIE. One of the responsibilities of JAC is to support FAO and OIE in reviewing applications from institutes wishing to become FAO-OIE rinderpest holding facility for the secure storage 'sequestration' of rinderpest virus. The Committee review applications for research involving rinderpest virus. The objectives of the research proposal should aim to protect or improve food security, human and livestock health for local and worldwide populations.

The committee is made up of seven external advisors in veterinary virology, diagnostics, vaccinology, epidemiology, contingency planning, biothreat reduction and bio-safety/biosecurity, as well as one scientific representative each from the OIE and FAO.

Destruction and Sequestration of RVCMs

To maintain world freedom from rinderpest and upon requests from countries to assist with virus removal from their facilities, FAO expert teams support countries with virus destruction, sequestration, facility decontamination, packing and shipping RVCMs to rinderpest holding facilities. Currently seven laboratories with high levels of biocontainment are approved as FAO-OIE Rinderpest Holding Facilities (FAO-OIE RHF)

Disease Surveillance

FAO's role is to strengthen national and global surveillance networks to rapidly detect, confirm and respond to any suspected rinderpest related events. Disease surveillance supports early warning which is a critical component of the post-rinderpest eradication activities. Early detection of suspicious and clinical events will lead to faster implementation of containment measures. The rinderpest related surveillance activities are conducted under the existing joint FAO–OIE–WHO Global Early Warning System (GLEWS) located in Rome.

Activities focus on improving national capacities for syndromic surveillance, case detection and reporting of suspicious events by stakeholders in high-risk regions where rinderpest was historically found. Efforts also focus on improving global capacities through rumor tracking and prompt verification. Regional training on field outbreak methods to improve disease reporting are being conducted with a focus on data entry, analysis and reporting.

Advocacy

High-level meetings organized by the secretariat are positively impacting efforts to maintain global freedom from rinderpest. The advocacy has brought more countries and resources together to destroy or sequester virus stocks at designated FAO-OIE Rinderpest Holding Facilities (RHFs).

Communications

FAO is also raising awareness of rinderpest and

similar transboundary animal diseases at farmers' and government levels to enable them to recognize and report for immediate response in the event of re-emergence. Communication campaigns have been carried out in five countries: namely Egypt, Ethiopia, Kenya, Nigeria, and Senegal.

Kenya carried out a communication needs assessment as related to rinderpest in 2016 and in 2017 developed its post eradication rinderpest communication strategy which is currently being implemented. This year the Director of Veterinary Services in Kenya in collaboration with FAO will carry out a post rinderpest communication campaign targeting veterinary doctors, lab personnel and researchers. FAO has also developed an e-learning module with a goal to sensitize vets and other animal health personnel on rinderpest.

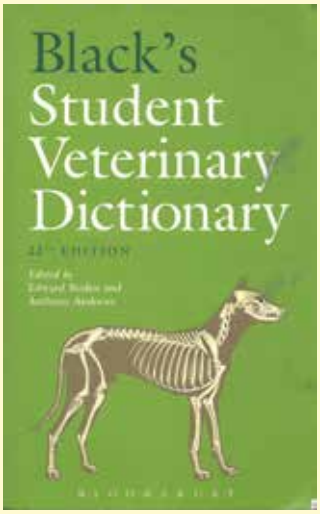
(Dr. Samia Metwally is a Senior Animal Health Officer (Virologist) and is the head of post rinderpest eradication secretariat)

CROSSWORD PUZZLE

W	A	N	E	G	Y	X	O	T
S	A	N	I	T	I	Z	E	F
M	I	S	O	L	A	T	E	K
T	Z	E	H	R	O	S	H	Y
S	T	A	Y	H	O	M	E	P
A	S	O	C	I	A	L	I	P
I	D	I	S	T	A	N	C	E
V	A	C	C	I	N	E	D	O
K	S	A	M	E	C	A	F	S

Find in the Crossword words that relate to Covid-19 containment measures, prevention and care. These words may run up-down/down -up, left-right/right-left or across. For answers, go to page 35.

By Dr. Isaiah Nchagwa Chacha
cnchagwa@gmail.com



Title: Black's Student Veterinary Dictionary

Edition: 22nd

Publisher: Bloomsbury

Editors: Edward Boden
Anthony Andrews

No of pages: 982

Year of publication: 2017

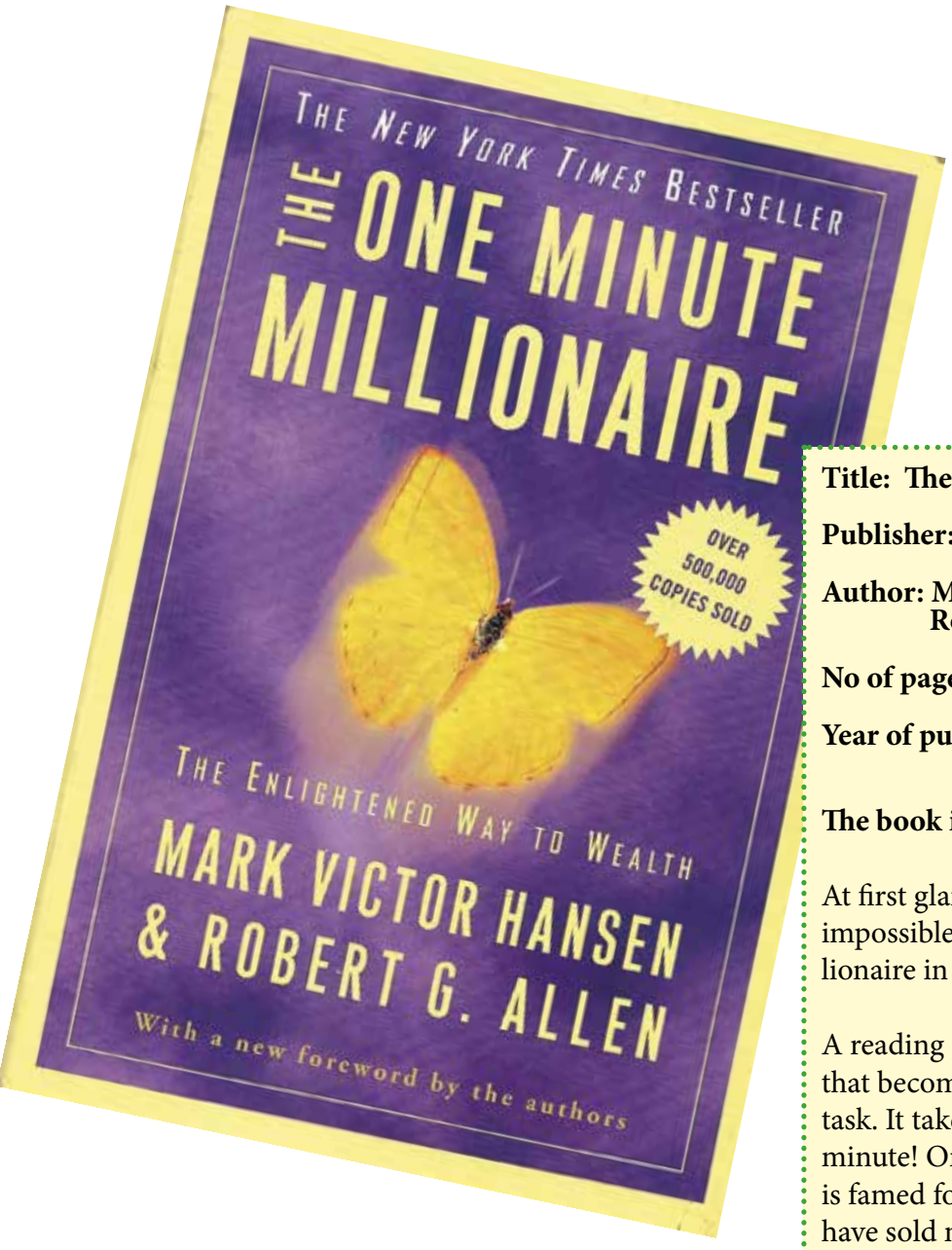
The book is in one colour on uncoated paper. Black's Student Veterinary Dictionary is an encyclopaedic dictionary in one handy volume.

Black's Veterinary Dictionary has been a bestseller for over 80 years, and the Student's edition has become an essential reference tool for anyone with an interest in the care of animals. Much more than a list of veterinary terms, its practical appraoch ensures that readers gain an insight into the signs and symptoms of common, and less common, diseases, their diagnosis and treatment.

For the 22nd edition, much new and updated information has been included, reflecting numerous developments that have taken place in animal care and husbandry, and welfare. There is greatly expanded coverage of topics relating to popular breeds of dog and cat, and the inheritable conditions that might affect their health.

Advances in medicine, surgery and diagnostic techniques; descriptions of newly identified diseases such as Schmallenberg virus; the resurgence of old scourges such as TB in cattle; and ongoing enzootic infections such as bird flu are included in this edition.

Black's Student Veterinary Dictionary is a must have reference. It is avilable from leading bookshops.



Title: The One Minute Millionaire

Publisher: Three Rivers Press

Author: Mark Victor Hansen & Robert G. Allen

No of pages: 424

Year of publication: 2002

The book is in one colour on newsprint paper.

At first glance, this book seems to be making the impossible promise of helping one become a millionaire in one minute.

A reading of the book however makes it clear that becoming a millionaire is not a one minute task. It takes time. But it begins with that first minute! One of the authors, Mark Victor Hansen is famed for the chciken soup series of books that have sold millions of copies around the world.

What gives the book the One Minute name is that the chapters are structured in such a way that each can be read in one minute.

How long does it take to get an idea that will generate a millionaire? A minute? or less? How long does it take to make the decision to become a millionaire? These are all intriguing queries.

The book is a must read and will challenge your thinking in new and intersting ways. At the end of the day, becoming a millionaire is hard work and it takes lots of time. But it begins with those one minute decisions we can make.

Answers to the wildlife crossword on page 33

SOCIAL-DISTANCE,
ISOLATE,
VACCINE,
PPE,
FACE MASK,
WASH HANDS,
SANITIZE,
STAY HOME,
OXYGEN.

SEEDS OF GREATNESS

God has planted seeds of greatness in each of us, and His plan for our lives is for those seeds to sprout, grow, and blossom.

Seeds are full of potential. Everything necessary for an oak tree to grow is held within the acorn.

It is our duty and responsibility to nurture the seeds of greatness inside of us through the study and application of God's Word and materials that feed our personal and spiritual growth.

When we do our part, God does his part. He grows the seeds of greatness in us until we become all he created us to be and do all he created us to do.

It is vital that we recognize the seeds of greatness planted inside of us, choose to nurture them and stay excited, inspired, and motivated on our journey to greatness in Christ.

One person and God can make a huge difference in the world. God needs each of us to dedicate ourselves to his greater purpose for our lives and we should encourage and nurture each others special talents, gifts, and unique qualities so that they may flourish and glorify God.

The key ingredient to embracing all God has to offer is change. As a created being, change is inevitable and to resist change is futile.

Though change offers challenges, "growing pains," and a newness that often requires us to walk through fears, it is the foundation of greatness. Embracing change means embracing the life that Jesus died to give us.

Allowing the acorn in all of us to transform into the towering oak it was created to be should always be at the foundation of all we do."

trouw nutrition
a Nutreco company

Trouw Nutrition is the global leader in innovative feed specialties, premixes and nutritional services for the animal nutrition industry (#2 premix producer globally, with a #1 position in Europe). Trouw Nutrition provides species-specific nutritional solutions consisting of feed concepts, products and nutritional know-how. The unique combination of products, models and services Trouw Nutrition offers, boosts productivity and supports animal health through all life stages, contributing to our customers' peace of mind. Trouw Nutrition solutions are designed to meet the needs of farmers, home-mixers, feed producers, integrators and distributors. Trouw Nutrition employs over 5000 people located in 25 countries.

Next to export from Europe, a rapidly increasing proportion of Trouw Nutrition's products are being produced locally in African countries, including Egypt, Nigeria, South-Africa and Zambia.

To increase our presence in East Africa and in particular Kenya, Trouw Nutrition has appointed Elgon Kenya as a partner to distribute their products, and act as a platform to deliver our services to the animal feed millers and integrators. Elgon Kenya has since 1898 positioned itself as a one-stop-shop for both small and large-scale farmer and an industry leader in market-lead innovations and services in East Africa. This has been complemented by a host of game changing technologies that are redefining agriculture. Through strategic partnerships, Elgon Kenya gives farmers world-class products and services. Elgon has a nationwide network of stockists enabling products to reach every corner of Kenya as per its slogan of "Transforming Farms and Lives Through Technology". This partnership will deliver the following solutions to start with, with more to follow:

Selko
Advanced additives, high performance

Mycotoxin management program: integrated approach for mycotoxin control with analysis test (Mycomaster) and solution (Selko Toxo).

Profish Omega: A trusted replacement for fish meal protein and fish oil.

PROFISH Ω

trouw nutrition
a Nutreco company

Reliable feed premixes: Trouw Premixes allows for accommodation of specific requirements for minerals, vitamins and additives tailored to your production system, while relying on Trouw Nutrition's expertise and global reach.

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ELGON KENYA
TRANSFORMING FARMS & LIVES THROUGH TECHNOLOGY

1898

KENYA VETERINARY ASSOCIATION

INSURANCE SCHEME

The Kenya Veterinary Association has negotiated favorable rates for its' members and family with the KCB Bank for two insurance covers:

1) The Simba Afya Medical insurance cover; and

2) The last respect insurance cover.

Medical insurance scheme

Simba Afya product is a comprehensively packaged medical insurance cover offering hospitalization and optional outpatient benefits. Some of its features are:

- With an inpatient limit of Kshs 500,000 and outpatient limit starting from Kshs 50,000
- Total premium for both inpatient and outpatient starting from Kshs 30,837
- Premium can be paid through premium financing
- Ease of access – available at all branches of KCB

For more details about the above covers please contact your KVA branch secretaries directly or drop us an email at **info@kenyavetassociation.com** or call us on **0727 680 022**

Last respect cover

The last respect covers funeral expenses. A specified amount is paid within 48 hours upon notification of death and presenting required documents in respect of the insured persons. Main features include:

- Benefit options range from Kshs 50,000 to Kshs 500,000 (with an annual premium ranging from Kshs 1,200 to Kshs 11,400 respectively)
- The entry ages range from 14 days to 80 years
- The policy is issued for one year and renewable annually (i.e. every 12 months)
- Premium is payable upfront
- The policy covers: return of mortal remains back home, burial expenses, cost of accompanying family members, coffin expenses and funeral expense benefit on named dependents
- Ease of access – available at all branches of KCB