

# **CURRENT POULTRY DRUGS AND CHALLENGES IN KENYA**

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# POULTRY POPULATION IN KENYA

- **31,827,529**
- Indigenous chickens 80%
- Exotic chickens 18%
- Other species 2%

Source: 2009 Census

[ **64,000,000 KPBA** estimates in **2013**:

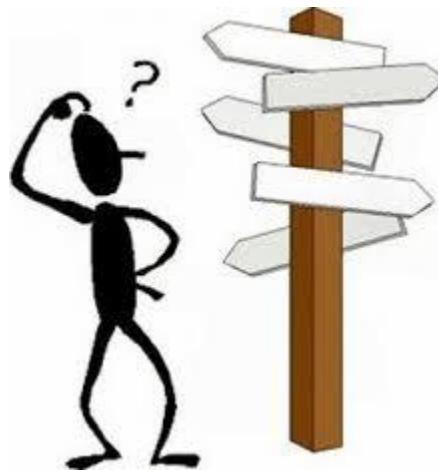
Local 40, Broilers 14 and 10 million Layers]

- The production of poultry meat surpassed **45,000 metric tonnes in 2013**

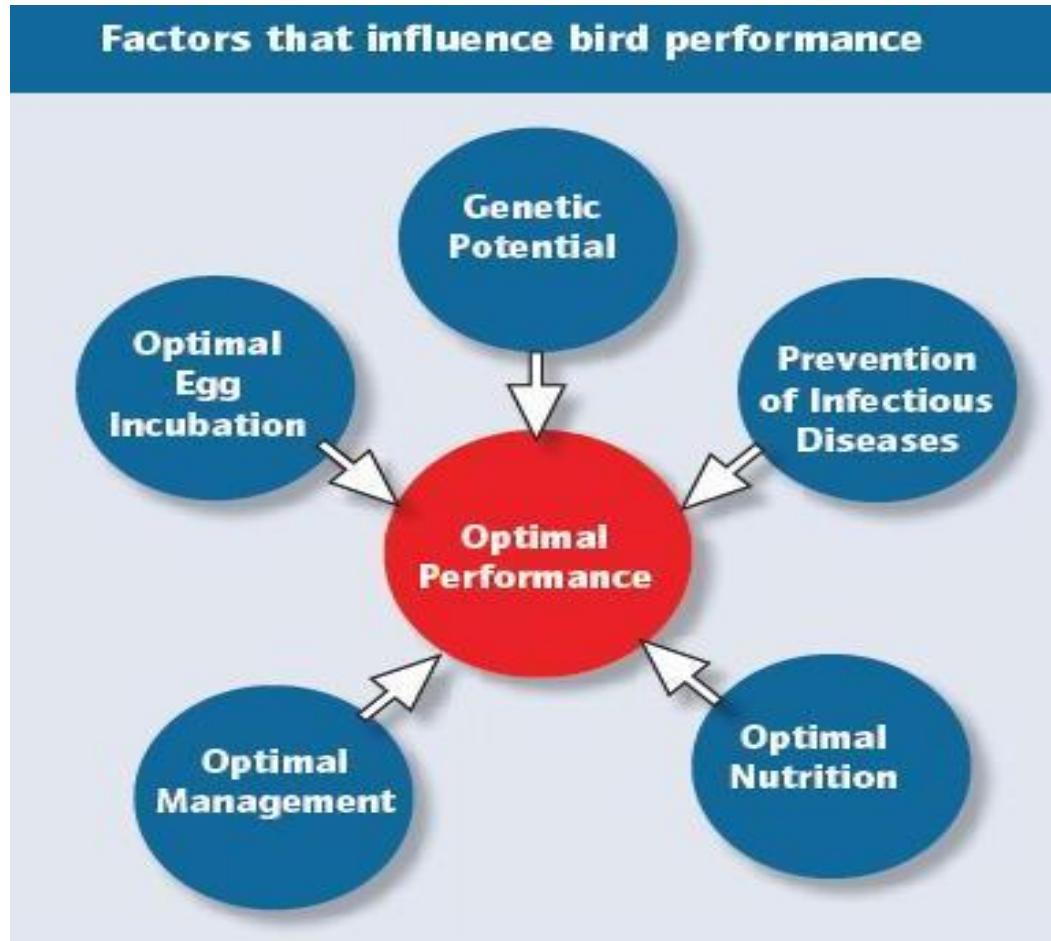
# SPECIES AND WHICH FARMING PRODUCTION SYSTEM ?



06/08/2014



# CORNERSTONES OF MODERN AVIAN HEALTH



# POULTRY DISEASE DISTRIBUTION IN KENYA AS TO CAUSE

<b>CAUSE OF CONDITION</b>	<b>PERCENTAGE</b>
<b>PARASITIC/HELMINTHS</b>	<b>47.58</b>
<b>BACTERIAL</b>	<b>27.87</b>
<b>VIRAL</b>	<b>17.01</b>
<b>MYCOPLASMAL</b>	<b>5.61</b>
<b>NUTRITIONAL</b>	<b>0.79</b>
<b>POISONING</b>	<b>0.66</b>
<b>NON -SPECIFIC</b>	<b>0.37</b>
<b>METABOLIC</b>	<b>0.11</b>
[n=80,000 cases: 2003-2014]	Source: Dr H. Mbugua]

# LEGAL/REGULATORY FRAMEWORK

- THE **CABINET SECRETARY FOR HEALTH** IN CONSULTATION WITH THE **PHARMACY AND POISONS BOARD** IS EMPOWERED BY SECTION 44(1) OF THE PHARMACY AND POISONS ACT, **CAP 244** AND MISC. AMENDMENTS OF 2002 TO MAKE RULES UNDER WHICH **MEDICINES** MAY BE IMPORTED, MANUFACTURED FOR SALE OR SOLD IN KENYA.
- **EXPECTED** THE VETERINARY MEDICINES AND POISONS BILL, 2004

# ANIMAL HEALTH SERVICE PROVIDERS' SUPERVISION /REGULATION

- VETERINARY INSPECTORATE: **KVB & DVS**
- PEST CONTROL PRODUCTS BOARD (**PCPB**)
- THE VETERINARY SURGEONS AND VETERINARY PARAPROFESSIONALS ACT, 2011 (NUMBER 29 OF 2011)

# PURPOSE FOR USAGE OF ANTIBIOTICS IN POULTRY

- GROWTH PROMOTION
- PROPHYLACTIC
- METAPHYLACTIC
- THERAPEUTIC
- ERADICATION OF DISEASES



# ROUTES OF ANTIBIOTIC ADMINISTRATION IN POULTRY

- **IN FEED**
  - Long term medication and insolubility in water
- **IN WATER:**
  - Short term medication
  - Birds off feed, due to sickness or on a feed restriction program
  - Oral infection
- **HYPODERMIC/PARENTERAL**
  - Poor intestinal absorption
  - Individual treatment
- **IN OVO / YOLK SAC INOCULATION**
  - Egg hygiene not guaranteed
- **TOPICAL**
  - Ointments(wounds), oxytoxin(egg bound)&(evermectin (parasites))

# USAGE OF ANTIBIOTICS IN FARMS REPORTING DISEASE OCCURRENCE

CLASS OF ANTIBIOTIC	PERCENTAGE OF USE ON FARMS (N=50)	EXAMPLES SEEN ON FARM
TETRACYCLINES	20	Doxyclyline/OTC/Hipramox-p
QUINOLONES/FLUOROQUINOLONES	16	Enrofloxacin/Flumequine
SULPHONAMIDES	12	Biotrim/S-dime/Astrisul 480
POLYPEPTIDES	12	Colistin/Bacitracin
MACROLIDE	12	Tylosin 75% / Erythromycin
AMINOGLYCOSIDES	10	Biosol Vet/Gentamycin
FASTOMYCIN	6	Fosbac Plus
PENICILLIN	4	Amoxillin/Amoxivet
PLEUROMUTILIN	4	Tiamulin
STREPTOGRAMINES	4	Virginiamycin

**NB: Brand names are examples only and not endorsement or criticism of those not listed**

# DRUG SENSITIVITY TEST RESULTS FOR AN 8,000 LAYER FARM WITH PERSISTENT LOW MMORTALITY

DRUG NAME	GRAM NEGATIVE BACTERIA RODS				ESCHERICHIA COLI						
	SAMPLE REFERENCE NUMBERS [+ = SENSITIVE - = RESISTANT]										
	22/2	22/3	22/5	22/6	22/5	22/1		22/4		22/7	
Contrimixazole	+	+	+	+	-	-	-	-	-	-	-
Colistin	+	+	+	+	+	+	+	+	+	+	+
Doxycycline	+	+	+	+	-	-	-	-	-	-	-
Enrofloxacin	+	+	-	-	+	-	-	-	-	-	-
Flumequine	+	+	-	-	-	+	-	+	-	-	-
Neomycin	+	+	+	+	+	-	-	-	+	-	-
Norfloxacin	+	+	-	-	-	-	-	-	-	-	-
	Liver	Yolk	Liver	Yolk	Liver	Faecal material					

# CHALLENGES IN ANTIBIOTIC USAGE

- LOW USAGE OF LABORATORY FACILITIES FOR DIAGNOSIS
- LOW BIOSECURITY AND FOOD SAFETY CONSCIOUSNESS
- HEAVY DISEASE CHALLENGE: ECONOMICS, CONVENIENCE AND LOW AWARENESS OF REGULATIONS WERE SEEN AS DRIVERS OF HEAVY ANTIBIOTIC USAGE
- ETHICS /CONFLICT OF INTEREST IN SELLING , PRESCRIBING & TREATING
- LOW ADHERENCE TO MANUFACTURERS' INSTRUCTIONS
- LOW LINKAGE BETWEEN PRODUCERS/KNOWLEDGE CENTRES/VETERINARY PRACTITIONERS/REGULATORY AUTHORITIES/CONSUMERS
- POOR RECORD KEEPING
- ANTIBIOTIC RESISTANCE DEVELOPMENT

# WAY FORWARD: STEPS TO TREATMENT

- STATE/COUNTY / PRIVATE **VETERINARY INVOLVEMENT IN THE VALUE CHAIN & ENFORCEMENT/OVERSIGHT OF REGULATIONS**
- **PROBLEM IDENTIFICATION: HISTORY, ENVIRONMENTAL, CLINICAL & POST MORTEM ASSESSMENT**
- CONSTRUCTION/CREATION **PRACTICAL DIFFERENTIALS**
- **TENTATIVE DIAGNOSIS**
- **LABORATORIAL CONFIRMATIVE DIAGNOSIS**
- **INCREASED USE OF POINT OF CARE RAPID TESTING KITS**
- **ANTIBIOGRAM/SENSITIVITY TESTING IN LINE WITH LOCALLY AVAILABLE ANTIMICROBIALS**
- **ANTIBIOTIC SELECTION-AVAILABILITY,SAFETY& COST BENEFIT**
- **ADHERENCE TO MANUFACTURER'S RECOMMENDATIONS**
- **DOCUMENTATION OF ALL ABOVE IN A SIGNED REPORT**

# WAY FORWARD

- FEASIBLE TO SWITCH TO **“NO ANTIBIOTICS”** BECAUSE OF SHORT LIFE CYCLE OF POULTRY [5-82 WEEKS]
- DEVELOPMENT OF ALTERNATIVE THERAPIES TO OVERCOME RESISTANCE e.g. Herbs or MOLECULAR RESEARCH to inhibit resistance development directly
- REAL TIME AVAILABILITY OF VETERINARY PRODUCTS IN USE
- EDUCATION PROGRAMS ON CODES OF GOOD PRACTICES & FOOD QUALITY ASSURANCE SHOULD PROMOTE THE RESPONSIBLE AND PRUDENT USE OF ANTIBIOTICS

# KNOW A NORMAL BIRD WELL

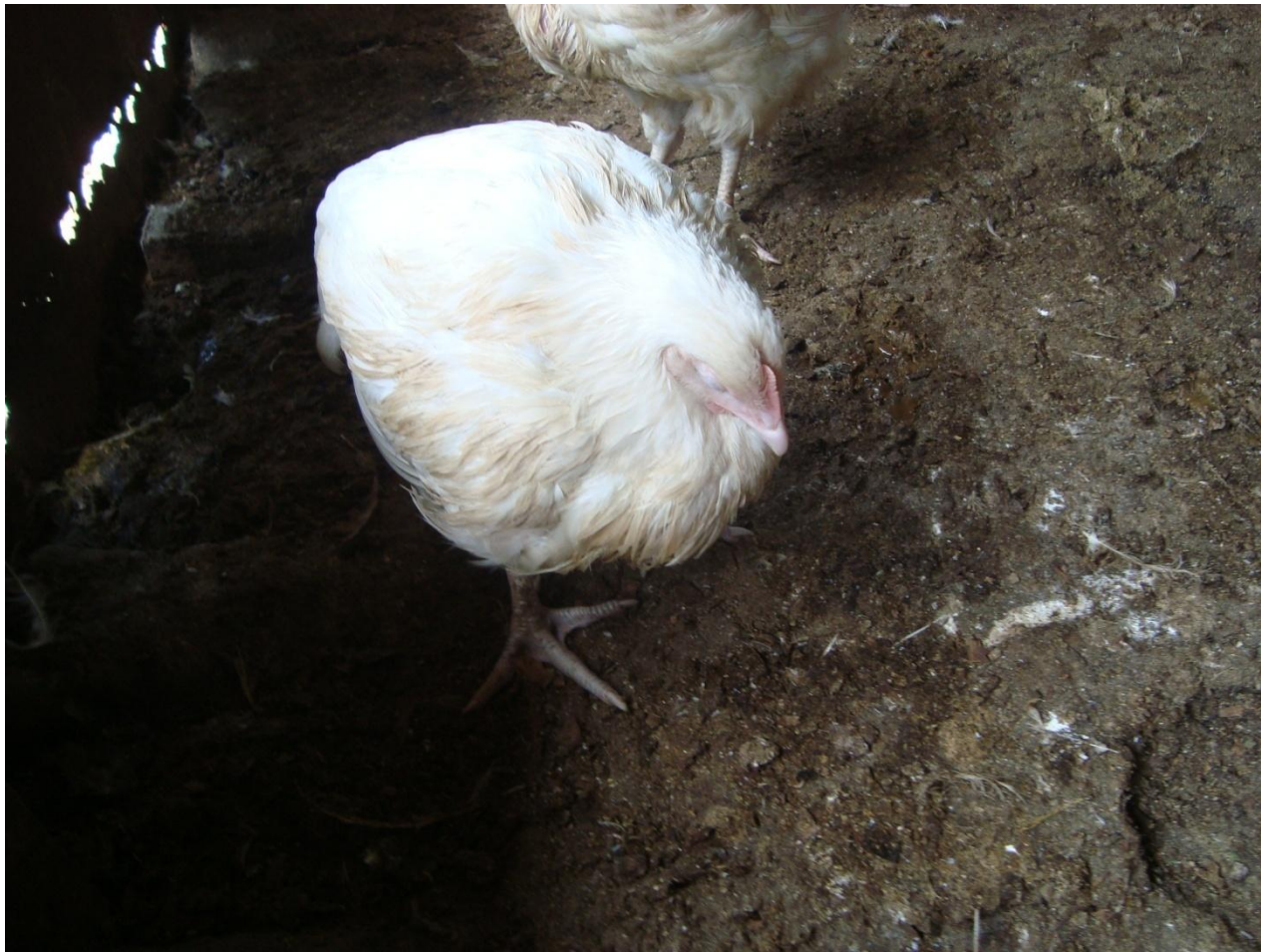


# HEALTHY BROILER BREEDERS





# RECOGNIZE CLINICAL SIGNS EARLY



# RECOGNIZE SYMPTOMS EARLY



# POST MORTEM AND SAMPLE SELECTION

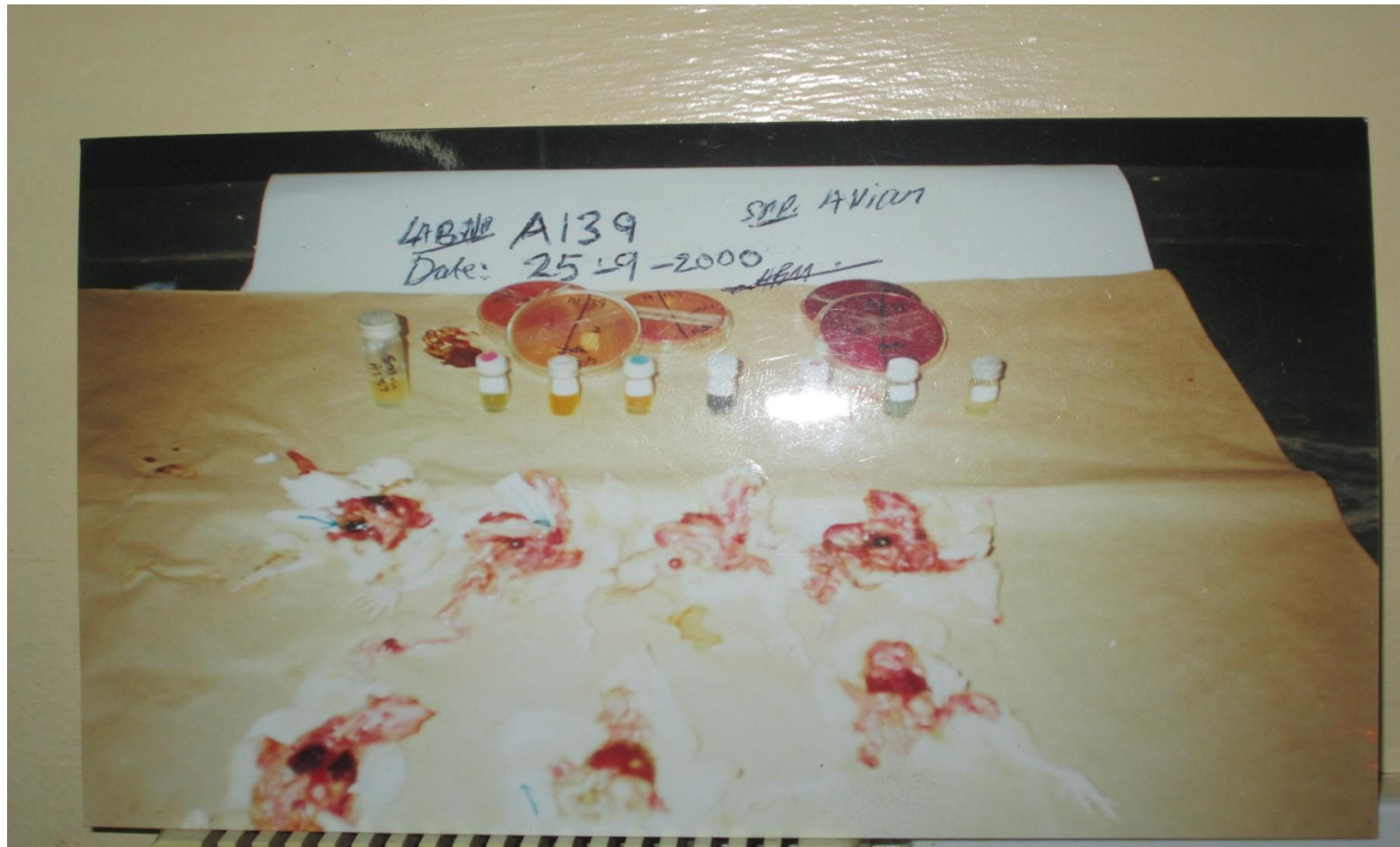


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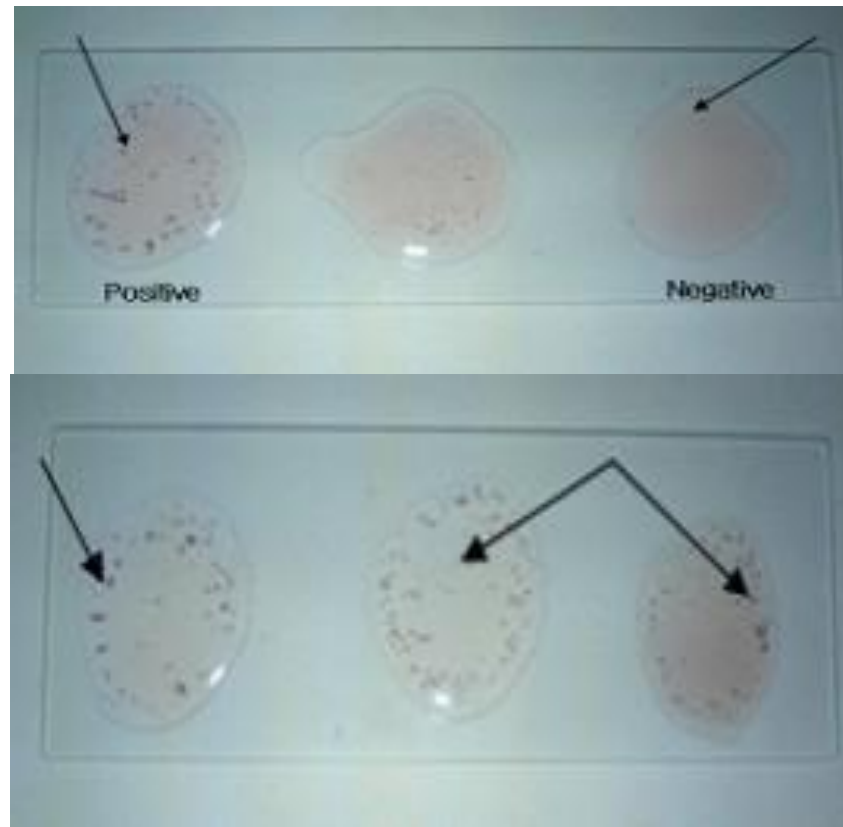
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# LABORATORY CONFIRMATION



# LABORATORY CONFIRMATION



# HERBAL TREATMENT



# DANGER OF ANTIBIOTIC RESIDUES IN POULTRY PRODUCTS





# WE ARE ALSO CONCERNED



**THANKS FOR  
LISTERNING ABOUT MY  
HUSTLES**