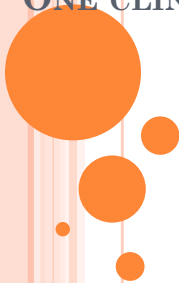


# PHASING OUT THE USE OF CLASS 1 ANTIMICROBIALS: ONE CLINIC'S APPROACH.



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1

- **“By 2050, drug resistant infections will kill an extra 10 million people a year worldwide, more than currently dying from cancer, unless action is taken.”**

Source: review team on Antimicrobial Resistance 2014.



2

- In Quebec, since the late 80s, any delivered antimicrobial has required a veterinary prescription.
- By 2015, 98% of Quebec veterinarians had completed compulsory courses on antibioresistance and the judicious use of antibiotics.
- This program was conducted by the Ordre des Médecins Vétérinaires du Québec in order to promote animal and public health.



3

## MOSTLY USED CLASS 1 ANTIBIOTICS

- **CEFTIOFUR:**
  - LACTATING INTRAMAMMARY TUBES
  - DRY COW INTRAMAMMARY TUBES
  - INJECTABLES ON LACTATING COWS
- **POLYMYXIN B** (COMBINATION ANTIBIOTIC PRODUCT):
  - INTRAMAMMARY TUBES
- **ENROFLOXACIN:**
  - INJECTABLES



4

## QUEBEC'S PROVINCIAL LAW ON CLASS 1 ANTIMICROBIALS IS EFFECTIVE SINCE FEBRUARY 25TH 2019



5

## CLIENTS

- 95% **DAIRY**,
- 5% **COW-CALF,SHEEP,GOAT AND ALPAGA**



6

## APPROACH TO PHASE OUT CLASS 1 ANTIMICROBIALS

- **NEWSLETTER TO CLIENTS IN FALL 2018.**
- **ONE ON ONE DISCUSSION WITH CLIENT DONE BY THE VET RESPONSIBLE FOR THE HERD.**
- **MEETINGS AT THE CLINIC FOR CLIENTS WITH NO HERD VET.**



7

## APPROACH TO PHASE OUT CLASS 1 ANTIMICROBIALS

- **A GOOD SOFTWARE PROGRAM FOR THE CONTROL OF PRESCRIBED ANTIBIOTICS (VET-EXPERT SOFTWARE)**
  - ANNUAL PRESCRIPTION
  - DAILY PRESCRIPTION
  - CLASS 1 PRESCRIPTION
- **ANTIBIOTIC ALTERNATIVES**
- **USE OF CLASS 1 IF NO ALTERNATIVE WITH SUPPORTIVE BACKGROUND:**
  - MILK CULTURE WITH ANTI BIOGRAM**



8

## HOW TO DECREASE USE OF ANTIBIOTICS

- **ZERO-ZERO PROGRAM ON CALVES( NO MORTALITY AND NO ANTIBIOTICS).**
- **IMPROVED VACCINATION ON CALVES, HEIFERS AND COWS.**
- **SELECTIVE DRY COW THERAPY.**
- **OVERALL: MORE VACCINATION AND LESS USE OF ANTIBIOTICS.**



9

## HOW TO DECREASE USE OF ANTIBIOTICS

- **MANAGING ALL ANTIOXIDANTS IN COW RATIONS (LACTATING AND DRY COW RATIONS).**
- **TESTING FOR MYCOTOXINS, YEASTS AND MOLDS IN COW RATIONS.**
- **CONTROL-PREVENTION /ERADICATION OF LEUCOSIS, PARATUBERCULOSIS, SALMONELLA DUBLIN...**



10

## HOW TO DECREASE USE OF ANTIBIOTICS

- **MANAGING COW PREPARATION TO CALVING: REDUCING METABOLIC DISEASES (HYPOCALCEMIA AND KETOSIS).**
- **ASSURING OPTIMAL COW COMFORT.**
- **BIOSECURITY CONTROL (ANIMAL PURCHACES, VISITORS...).**



11

## CLASS 1: ANTIBIOTIC(AB) CONTROL






- **DECREASE OF CLASS 1 FOR 2019 VS 2018:**
  - 100% OF DRYCOW CEFTIOFUR TUBES
  - 100% OF POLYMYXIN B (COMBINATION ANTIBIOTIC PRODUCT TUBES)
  - 92% OF LACTATING CEFTIOFUR TUBES
  - 82% OF INJECTABLE CEFTIOFUR
  - 82% OF INJECTABLE ENROFLOXACIN

INCREASE OF VACCINES IN 2019 VS 2018 OF 9.2%



12

## CLASS 1: ANTIBIOTIC(AB) CONTROL

- CLASS 1: AB IMM TUBES: 92% 
- CLASS 1: AB INJECTABLES: 82% 
- TOTAL AB IMM TUBES: 41% 
- TOTAL AB INJECTABLES: 53% 
- OVERALL ANTIBIOTICS: 53% 



13

## CLASS 1: ANTIBIOTIC(AB) CONTROL

- STEPS IN CONTROLLING CLASS 1 AB:

1 - LOOK FOR ALTERNATIVE AB.

2 - IF NO ALTERNATIVE, NEED FOR BACTERIAL CULTURE COMBINED WITH ANTIBIOGRAM.

3 - IF NO ALTERNATIVE ON THE ANTIBIOGRAM: A PRESCRIPTION OF CLASS 1 IS REQUIRED.



14

## VET SOFTWARE PROGRAM

- A RESEARCH PROJECT USING VET-EXPERT DATA WAS CONDUCTED (from Dec 2015 to Dec 2018)  
*“Quantification of Antimicrobial Usage and Development of an Antimicrobial Usage: Surveillance System in Quebec dairy Farms.”*
- CONCLUSION:  
***VERY HIGH CORRELATION BETWEEN ON FARM USE OF ANTIBIOTICS AND VET-EXPERT ANALYSIS REPORTS***



15

## VET SOFTWARE PROGRAM

Invoice Number : 11564

Cust.: [ASAO-MAPAO]    Paid    Invoiced    SubTotal: 36.06

SFA: [ ] Km: [ ] SNR: [ ] tps: 1.80

CP12: [ ] Date: 2019-09-28    Beginning Hour: 16:35    tvq: 3.60

NIM: [ ]    Total: 41.46

CP: [ ] Species: [ ] Tariff: [ ] Time: [ ] DX: [ ] Reason: [ ]

Name: [ ] Examined: [ ] Treated: [ ] Dead: [ ] Labo: [ ] Gov.: [ ] Breeder: [ ]

Ca.	CP	DX	Spe.	Name	Examined	Treated	Dead	Labo	Tariff	Time	MOC	Reason/Diagnos.	Gov.	Breed.

Sup.: [ ]    Invoice all to customer: [ ]    Curatif : 00:00    Préventif : 00:00    0.00    0.00

Case: [ ] CDMV: [ ] Drug: [ ] Form & Conc.: [ ] Qty: [ ] Cost: [ ]

Strength: [ ] Admin.: [ ] Length: [ ] Frequency: [ ] Milk: [ ] Meat: [ ]

Ca.	Drug	CDMV	Qty	Cost	Form & Conc.	Strength	Admin.	Length	Freq.	Milk	Meat
0	SPECTRAMAST LC10ml syri...	105256	6	36.06	UNIT	1 syringuer/qu...	intra-mam...	2 to 8 days	1x/days	96 H	2 D

Hôpital Vétérinaire ORMSTOWN Veterinary Hospital

16





**USE OF CATEGORY 1 ANTIBIOTICS**

IDENTIFICATION			
OWNER / FARM / SITE:		PREScription ID:	
		SPECIES:	
ID OF ANIMAL OR HERD OF ANIMALS TO BE TREATED: (name, n°, category and number)		SEX OF THE ANIMAL:	<input type="checkbox"/> M <input type="checkbox"/> F
		DESCRIPTION OF THE ANIMAL: (breed or crossbreed, hair colour, special features, etc.)	AGE OR DATE OF BIRTH:

**MEDICAL CONDITION**

The Regulation Amending the Regulation respecting the administering of certain medications prohibits the administration of a Category I Very High Importance antibiotic for preventive purposes and such administration for curative purposes to an animal intended for human consumption or whose products are intended for human consumption is reserved exclusively for cases where it appears, for instance, after carrying out an antibioticogram, that the administration of the medication of a class other than the classes of that category will not allow the treatment of the disease. Please consult the Regulation for more information on the other conditions of use and on administration to embryonated eggs.

Given the above Regulation, for each event involving the prescription of Category I antibiotics, the following conditions must be met:

Please check as appropriate:

- 1. The Category I antibiotic was prescribed after conducting an appropriate examination of the animal or population of animals and obtaining full knowledge of all the facts.
- 2. The diagnosis was established with great care; the information has been recorded in the file or will be as soon as possible.
- 3. All treatment options considered have been recorded in the file dated:  
No antibiotic from a lower category of medications can be used to treat the condition in this specific case.
- 4. The client has been informed of the restrictions involving the use of Category I antibiotics and of the need to implement appropriate preventive measures whenever possible (vaccination, sanitary conditions, record of colostrum/immune gland/reproduction/immune system, etc.).

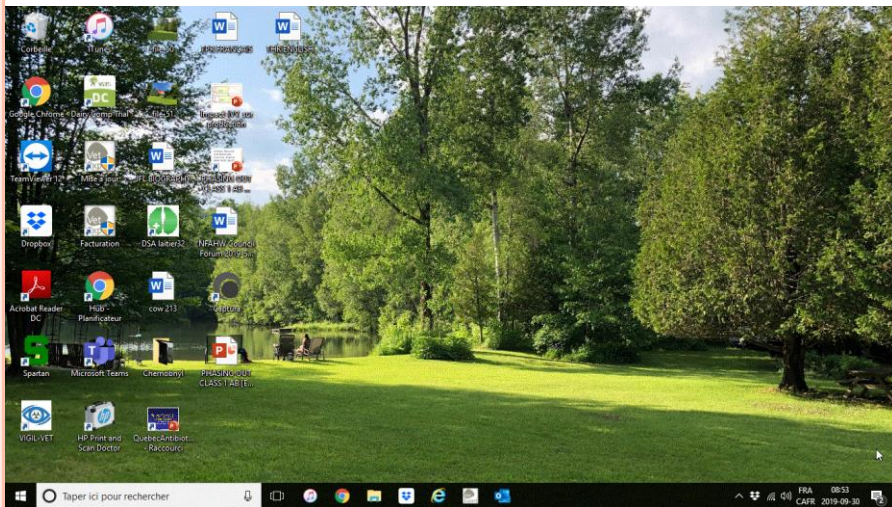
**VETERINARIAN ACKNOWLEDGMENT**

By signing this form, I assume professional liability and certify that the information provided herein is accurate.

_____ Signature of veterinarian and permit N°	_____ Veterinary establishment	_____ Date
	_____ Client signature	_____ Date



17



18



Any questions?