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Anti-Microbial Resistance (AMR)

What is Anti-Microbial Resistance?

- Where bacteria are able to grow/survive in the presence of an *antibiotic* that is usually able to inhibit or kill them
- Resistance tends to be to each class of antibiotic.
- Some bacteria can become **multi-resistant**
- Multi-resistant bacteria are much harder to treat
- There are now some multi-resistant bacteria that are not treatable with any available antibiotics

What Increases the risk of resistance?

- Using the wrong antibiotic for the wrong bacteria
- Inappropriate use of antibiotics: using them where there is no need e.g. viral calf scour with no systemic illness
- Incorrect dose
 - Under-dosing increases the risk of partially resistant bacteria surviving
 - Waste milk from antibiotic treated cows given to calves exposes bacteria in the calf gut to low dose antibiotic
- Not finishing a course may increase the occurrence of resistance
- Not getting a definitive diagnosis.

Why is AMR a concern for farmers?

- Antimicrobial resistance impacts on animal health, human health and the reputation of the agricultural and food industries.
- Resistance makes treating infections in animals and humans more difficult.
- Many antibiotics used in veterinary medicine are also used in human medicine.
- Resistant bacteria may be spread from animals to humans (and vice versa) via direct contact, environmental contamination and potentially through food-borne bacteria.

Responsible Use of Antibiotics on Farms

- Discuss all antibiotic usage with your own veterinary practitioner
- Only use High Priority Critically Important Antibiotics (HPCIA) as a last resort – seek alternatives.
- Use, store and dispose of antibiotics according to the directions given and keep records
- Avoid using blanket antibiotic treatments across a group of animals
- Investigate the cause of disease with your veterinary practitioner
- Use culture and sensitivity testing to help select the most appropriate antibiotic
- Explore strategies to prevent and control disease with your vet to minimise the need for antibiotics: a biosecurity plan to keep new diseases out of your farm; good colostrum management and vaccination programmes (where appropriate); reducing the sources of infection through good hygiene practices.

HP-CIAs

High Priority Critically Important Antimicrobials

These should only be used as a last resort when there are no alternative antimicrobials authorised;

- for the target species and disease indication
- or
- where response to alternatives is likely to be poor.

Fluoroquinolones	Enrofloxacin
	Marbofloxacin
	Danofloxacin

Polymixins	Colistin
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Cephalosporins	Cefoperazone
	Cefquinome
	Ceftiofur