Table showing Drugs used for Premedication in Bovine Castration in order of administration

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| --- | --- | --- | --- | --- | --- | --- |
| Drug Name | Concentration | Dosage | Volume | Administration | Rationale | WDI |
| Xylazine Ketamine (In combination) | 2% (20mg/ml)10% (100mg/ml) | 0.05mg/kg1mg/kg | 0.49ml1.96ml | IM (middle gluteal)IM (middle gluteal) | Sedation | Meat= 4 days(Milk=24hrs)Meat=3 days(Milk= 48hrs) |
| Combikel(Pen-Strep) | 200,000I.U/ml | 20,000I.U/kg | 19.6ml | IM ( half was given in the left gluteal muscle and the other half in the right) | Intra- and Post-Operative Antimicrobial Protection | Meat=21 days(Milk=3 days) |
| Banamine(Flunixin) | 50mg/ml | 1.1mg/kg | 4.3ml | IV ( Left Jugular vein, slowly) | Analgesia | Meat= 4days (for 2.2mg/kg dose)(Milk= 72hrs )Use in dairy cattle extra-label. |

Table of Reversal Drugs that may be needed Intra- or Post-Operatively.

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| --- | --- | --- | --- | --- | --- | --- |
| Drug Name | Concentration | Dosage | Volume | Administration | Rationale | WDI |
| Tolazoline | 100mg/ml | 2-4x Xylazine dose | 0.196-0.392ml | IV | Alpha-antagonist that reverses the effects of xylazine. | Meat= 8daysMilk= 48hrs |
| Atropine | 15mg/ml | 0.04mg/kg | 0.52ml | IV | Anti-cholinergic that reverse bradycardia | Meat= 14days(Milk= 3days) |
| Epinephrine | 1mg/ml | 0.02mg/kg | 3.92ml | IM | Causes vasoconstriction to counteract vasodilation in anaphylactic shock. | Endogenous molecule so no residues. |