**Extension Rate ((Dilution rate)):**

**Depend on**

**1 – Concentration**

**2 – Motility**

**How can calculate extension rate**

**Straw volume contain (0.1, 0.25, 0.5)**

**Straw sperm number (10000000, 25000000, 40000000)**

**Ejaculate volume in bull = 5 ml**

**Progressive sperm motions = 80%**

**1ml semen contain to = 1200000000 sperm**

**5ml semen contain to = 5×1200000000**

 **= 6000000000**

**Live sperm number each 1ml = concentration × motility**

 **= 1200000000 ×80%**

 **= 960000000**

**Live sperm number 5ml = 6000000000 ×80%**

 **= 4800000000**

**Dose number 1ml = live sperm number in 1ml** $÷sperm number in straw $

 **= 960000000** $÷40000000$

 **Dose = 24**

**Dose number 5ml = 5× dose number 1ml**

 **= 5× 24**

 **= 120**

**Dose number 5ml = live sperm number in 5ml** $÷sperm numer in straw $

 **= 4800000000** $÷40000000$

 **Dose = 120**

**If the straw volume 0.1 = 120 ×0.1**

 **= 12 ml**

**If straw volume 0.25 = 120×0.25**

 **= 30 ml**

**If straw volume 0.5 = 120×0.5**

 **= 60 ml**

**Extension volume total = semen volume + extension volume**

**If extension volume total = 12**

 **12 = 5 + extension volume**

**Ex tension volume = 12-5**

**Extension volume = 7 using in dilution**

**If extension volume total = 30**

**30 = 5+ extension volume**

**Extension volume =30-5**

**Extension volume = 25**