



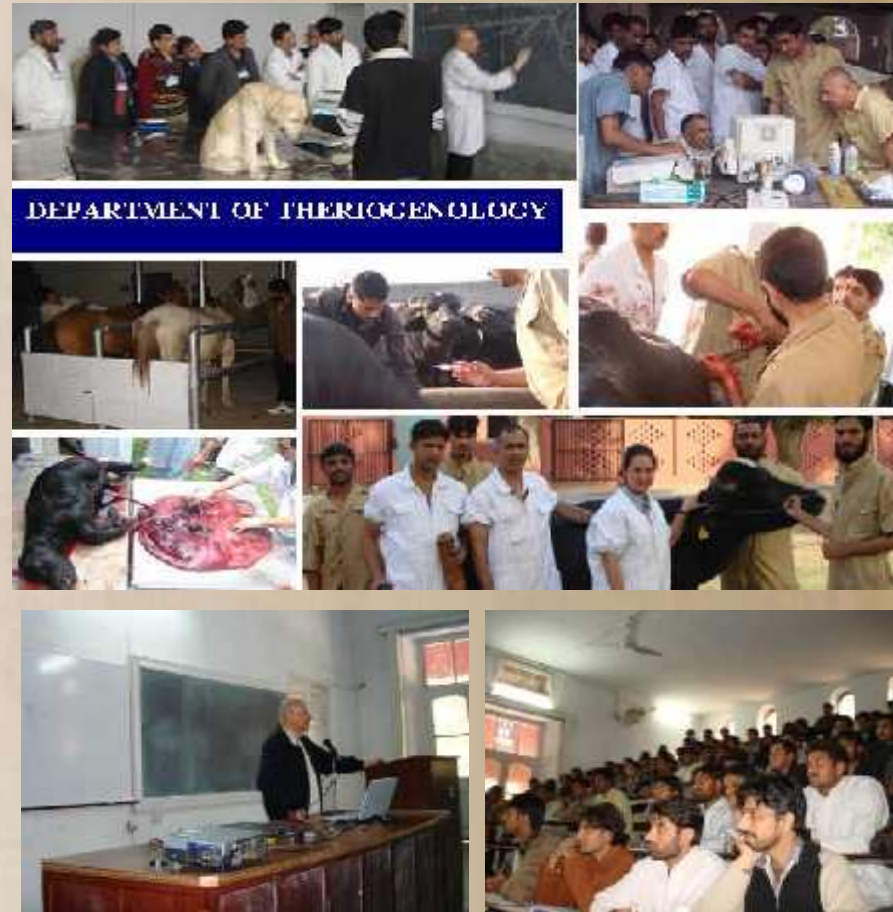
UVAS Since 1882

# REPRODUCTIVE MANAGEMENT IN DAIRY ANIMALS



# Department of Theriogenology, UVAS

- **Established Since 1981**
- **Faculty**
  - **Four of seven are PhD**
- **Teaching (DVM)**
  - **Repro Phys.**
  - **Obst. & Gen. Dis.**
  - **Reprod. Biotech**
  - **Clinics**
- **Research (M. Phil & PhD)**
  - **Follicular Development**
  - **Semen Quality**
- **Extension**



# Caesarean in Field Conditions





# Messages/ Outline

**1.Synchronization**

**2.BCS**

**3.Timed AI**

**4.Semen Quality Check**

**5.Ultrasonography/ Early PT**





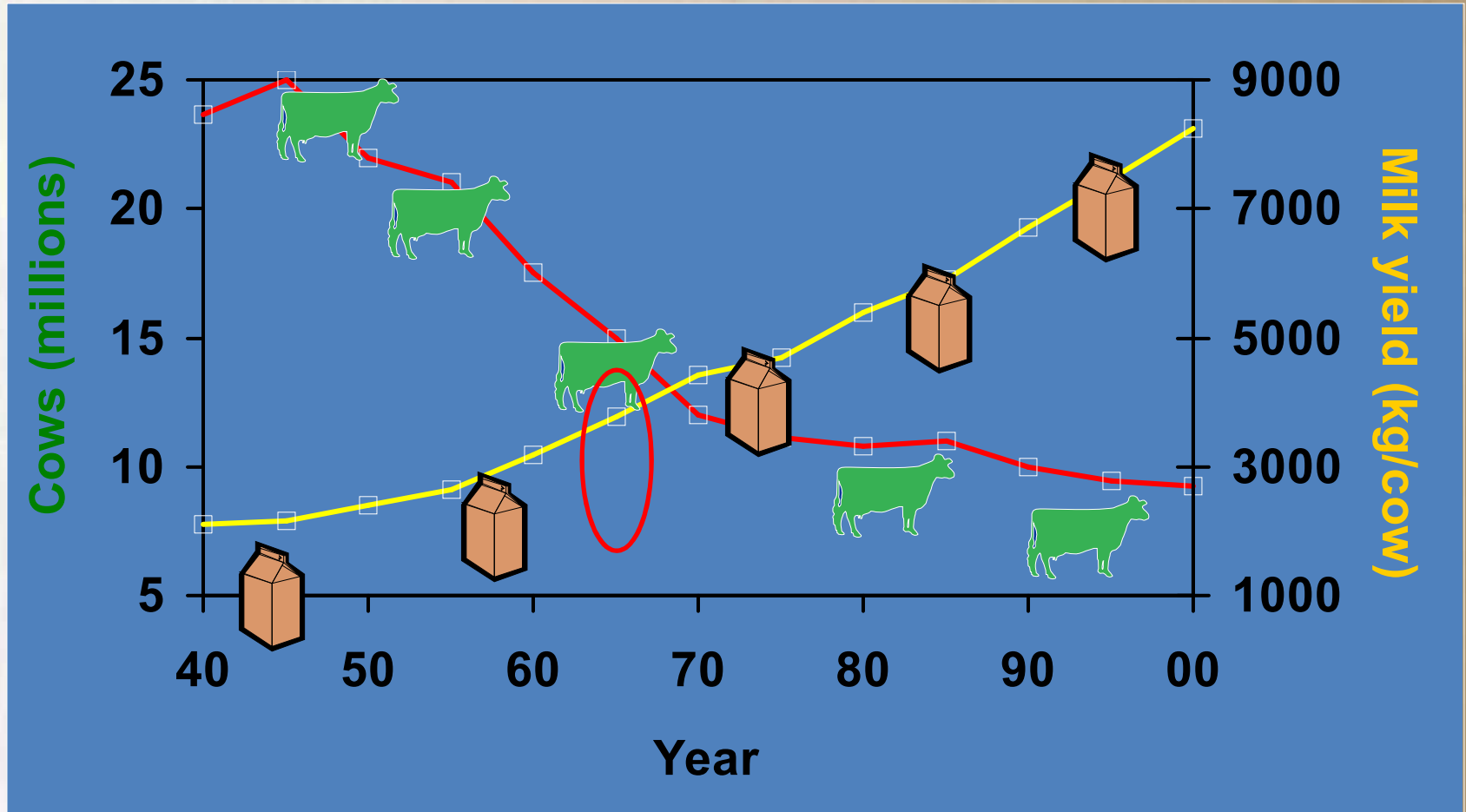
# PROBLEMS OF BUFFALO AND CATTLE REPRODUCTION

- Prolonged intercalving intervals
- Subtle behavioral estrus
- Summer Anestrus
- Poor estrus expression in summer
- Infertility, repeat breeding and COD





# U.S. Dairy Population and Yield





# Commercial Dairy farming is growing

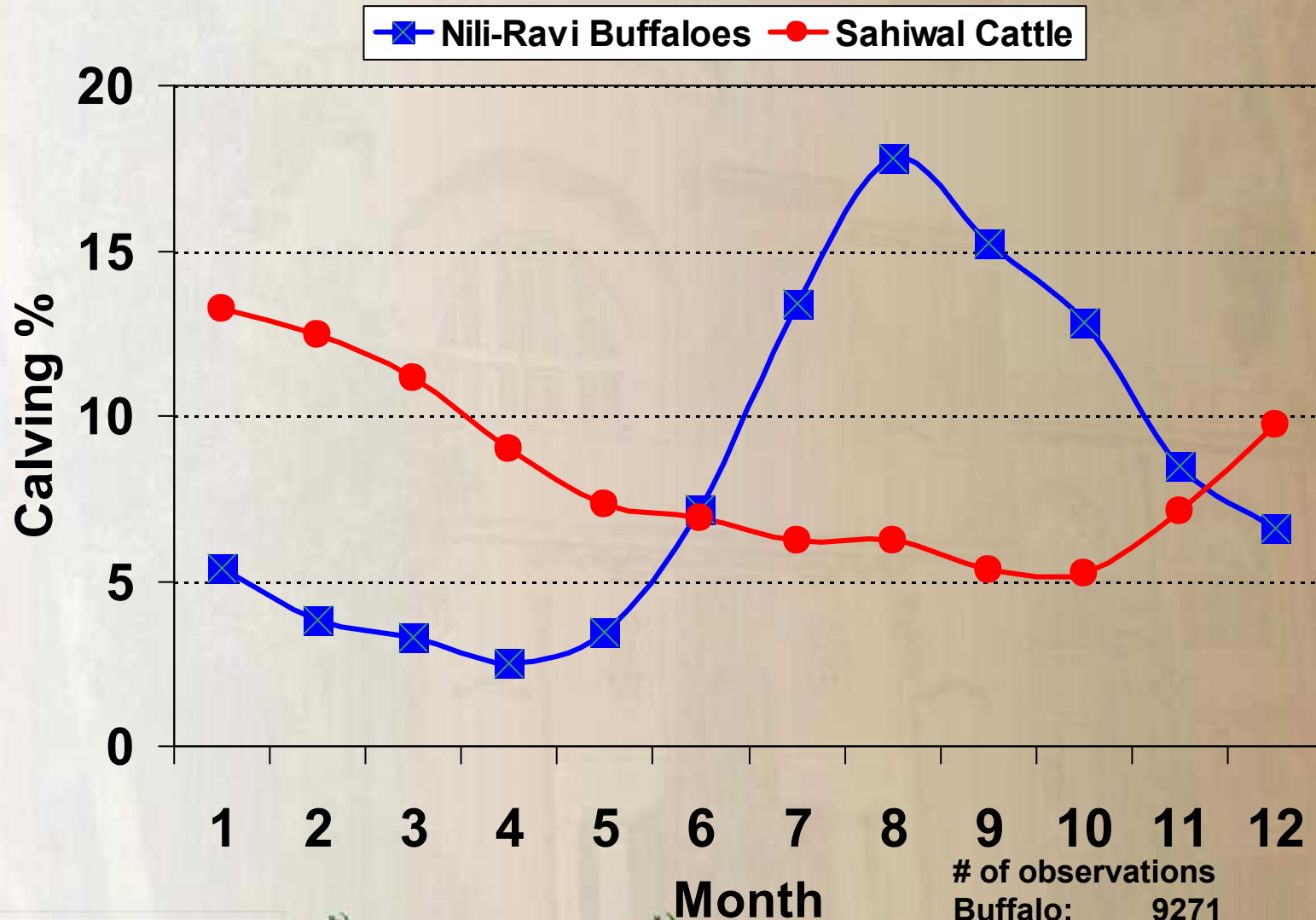


**USAID**  
FROM THE AMERICAN PEOPLE





# Calving Pattern of Dairy Animals



# of observations  
Buffalo: 9271  
Sahiwal: 22606

Hassan et al. (2007)





# Artificial Insemination



1

# PG Protocols



Treatment days

5 x 10 ml vials  
Sterile Solution

Al-Saeed Vet. Services  
PSP: 420/425/05/2010

**Lutalyse™**

Dinoprost. Tromethamine.

**5 mg/ml**

**لُوتالائز**

5 انٹیو پروستاگنڈین

5 می گرام فی ملی لیٹر

FOR VETERINARY  
Use for intramuscular injection in cattle and horses

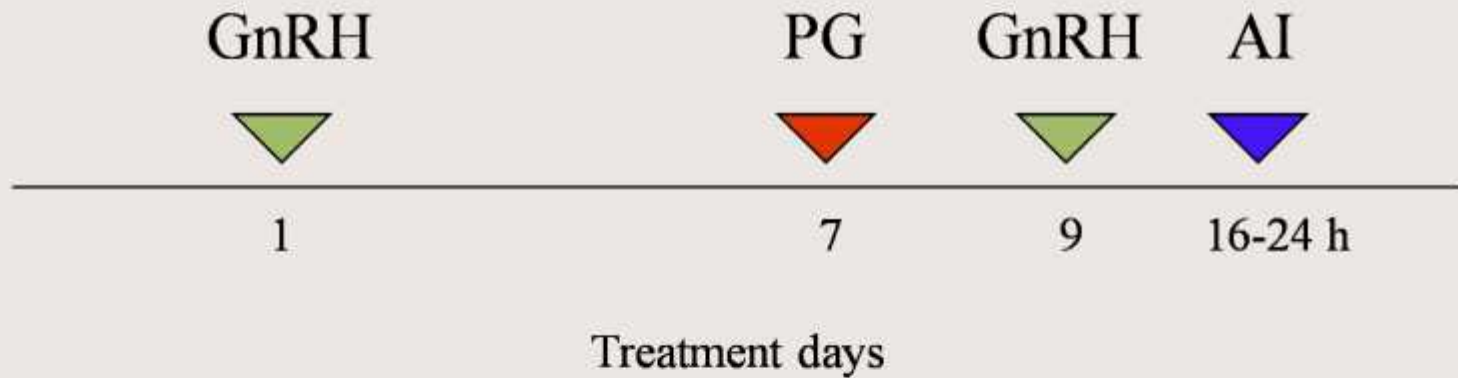


## PGF Protocol

# 2

## Ovsynch Protocols

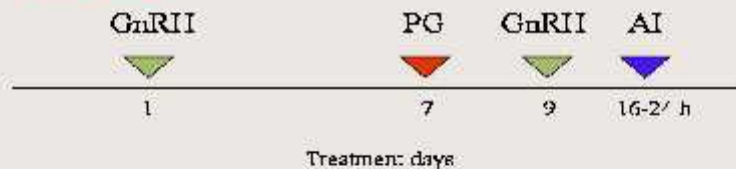
### Ovsynch





## Ovsynch Protocols

### Ovsynch



Ovsynch Protocol

3

# CIDR + PG Protocol

CIDR IN



1

PG Remove Heat Detect & AI  
CIDR



6

7

8-10

Treatment days

# CIDR

CONTROLLED INTERNAL  
DRUG RELEASE











## Effect of Estradiol Benzoate in CIDR treated adult buffaloes and heifer



Variables	Adult		Heifers	
	<i>CIDR</i>	<i>CIDR + EB</i>	<i>CIDR</i>	<i>CIDR + EB</i>
Estrus Intensity	3.7 ± 1.1	3.7 ± 0.6	3.6 ± 0.2	3.0 ± 0.6
Pregnancy rate %	3/7 = 42	3/8 = 38	5/10 = 50	6/10 = 60



Yousuf et al., 2007 Un Pub



## Effect of Estradiol Benzoate in CIDR treated cross bred heifers



Variables	CIDR	CIDR+EB
Estrus Response	11/15 (73%)	09/10 (90%)
Intensity of Heat	08/11 (73%)	08/09 (89%)
First service preg.rate	03/11 (27%)	06/09 (67%)

Qamar et al., 2010





## Use of CIDR for the Regulation of Fertility in Buffaloes



Variables	Low Breeding Season	Breeding Season
First Service Pregnancy Rate (%)	18/59 ( <b>30%</b> ) <sup>a</sup>	23/46 ( <b>50%</b> ) <sup>b</sup>
Second Service Pregnancy Rate (%)	40/59 ( <b>67%</b> ) <sup>a</sup>	29/46 ( <b>63%</b> ) <sup>a</sup>



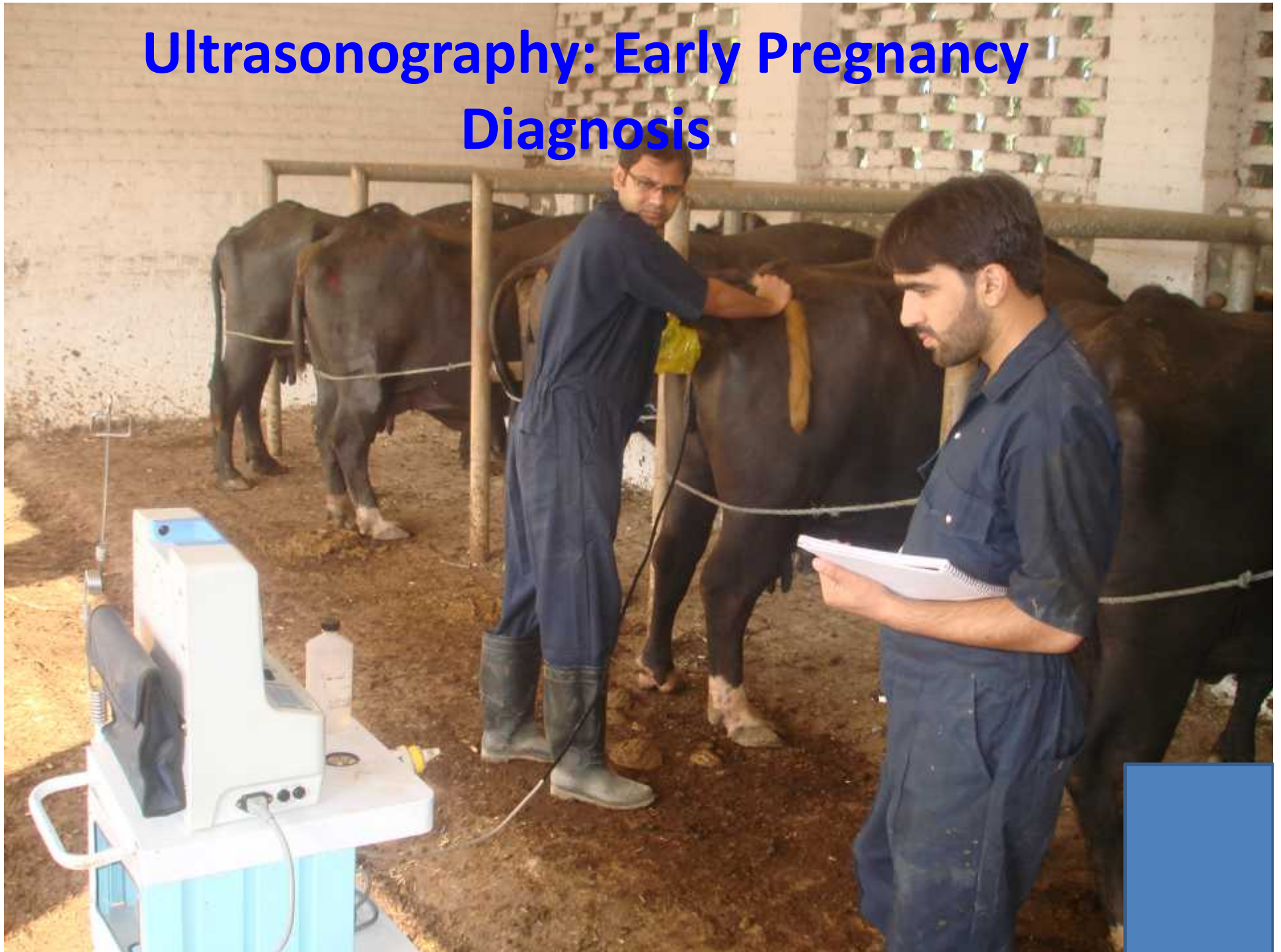
Ahmad et al., 2007

# Direct Application

Protocol	Estrus Response (%)	Preg. Rate (%)	Cost (Rs.)
PGF (one)	50	40 (20 of treated)	500 <b>\$6</b>
Ovsynch	70	35 (25 of treated)	1200 <b>\$14</b>
CIDR	90	50 (45 of treated)	2000 <b>\$23</b>



# Ultrasonography: Early Pregnancy Diagnosis





25 Day Pregnancy



30 Day Pregnancy



35 Day Pregnancy



43 Day Pregnancy



50 Day Pregnancy



100 Day Pregnancy





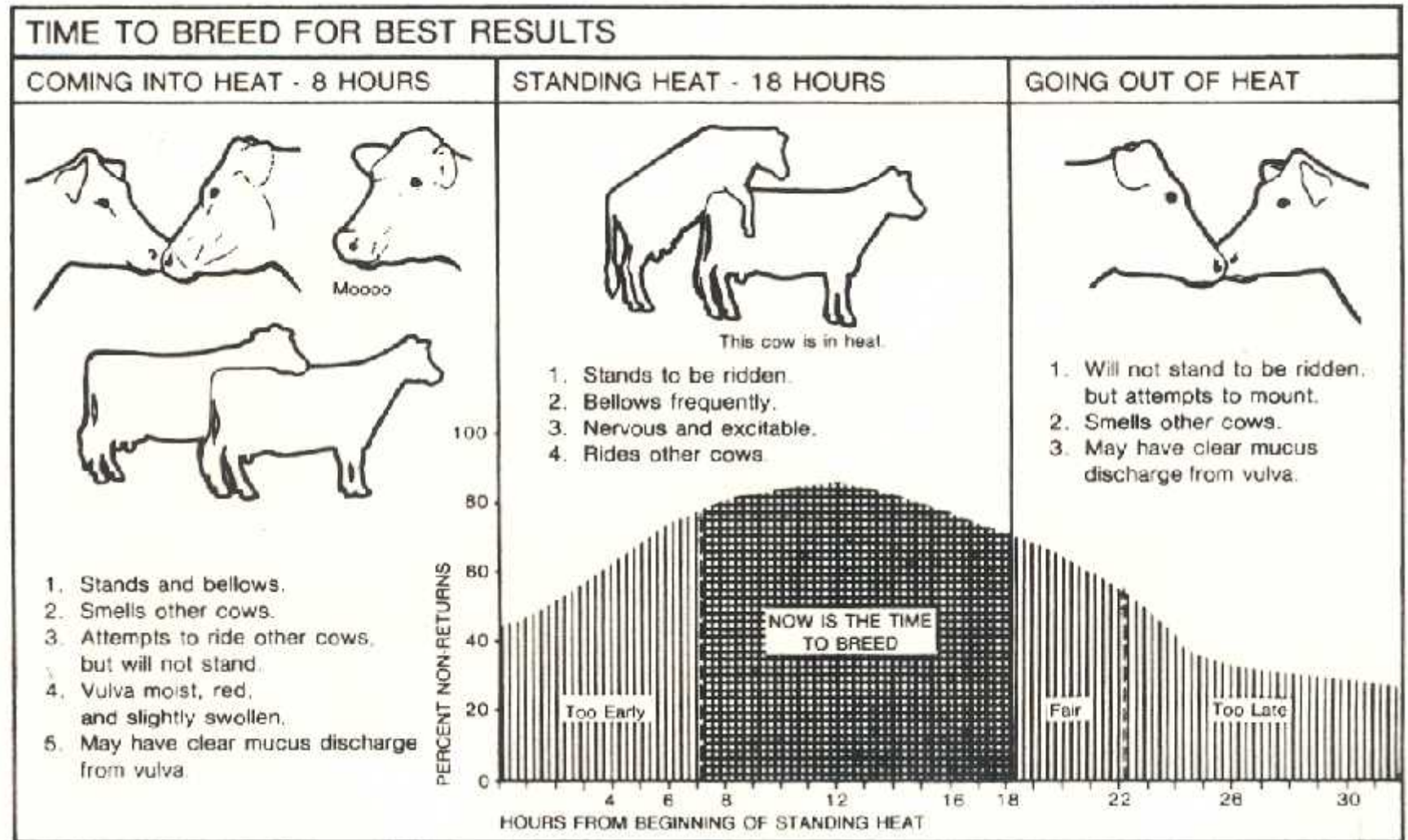
**NEW  
IDEA**

**Timed AI in  
Buffaloes**





# Optimum time of insemination in relation to onset of (standing) estrus (AM-PM rule)



- Fertilizable life of ova about 6 -12 hrs after ovulation

- Fertilizable life of sperm in female reproductive tract is 24-48 hrs



**Commercial  
Farming is  
Growing**





# Body Condition Score

1.5

3.0



# Our Black Gold

*Thank You & ?*

21 14:04



# ACKNOWLEDGEMENTS

- ALP PARC Islamabad
- Buffalo Research Institute Pattoki
- Living Dairies (Pvt.) Ltd. Chunian

