

# Blue Cow Red Cow Fertility Protocols

## Heifer Synchronization Protocols

### AI after detection of estrus



**Comments: 2XPGF**  
70% of heifers should be in estrus after the first PGF. Remaining heifers in estrus after the second PGF. Non-responding heifers may be prepubertal. This program typically yields greatest conception rates to AI at estrus.

### CIDR-PGF - Option 1 (PGF at CIDR removal)



### CIDR-PGF - Option 2 (PGF at 1 day before CIDR removal)



**Comments: CIDR-PGF**  
All heifers should be in estrus after CIDR removal. Nonresponding heifers may be prepubertal. Option 2 improves the synchrony of estrus. These programs typically yield slightly lower conception rates when compared with 2XPGF. CIDR based programs will induce fertile estrus in some heifers that are prepubertal at start of treatment.

### Definitions and comments:

**EDAI** = estrus detection and AI after detection of estrus.  
**PGF** = prostaglandin F2α.  
**CIDR** = Controlled internal drug release intravaginal insert containing progesterone.  
**GnRH** = gonadotropin-releasing hormone.

**Intensity of purple color within EDAI** denotes periods to expect most heifers in estrus. Most heifers come into estrus 2 to 5 days after PGF.

## Programs for Timed AI (TAI)

### 5dCIDR\_Cosynch 72 - Option 1



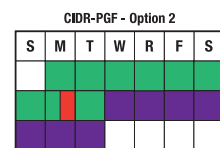
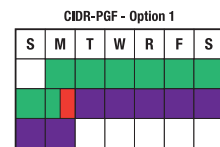
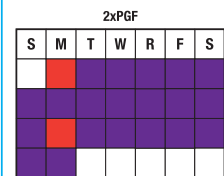
### 5dCIDR\_Cosynch 72 - Option 2



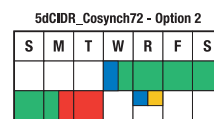
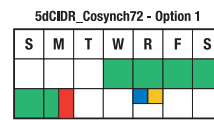
**Comments: SdCIDR Cosynch72**  
Option 2 yields slightly greater conception rate to TAI than option 1.

## Calendars

### AI after detection of estrus



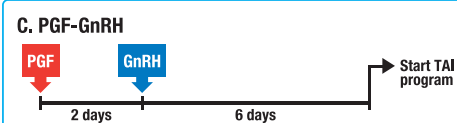
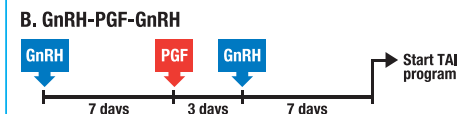
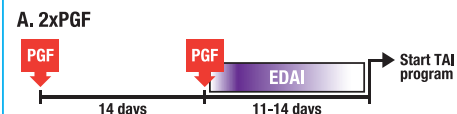
### Timed AI (TAI)



PGF GnRH TAI CIDR EDAI PD

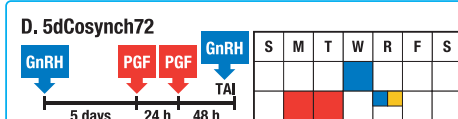
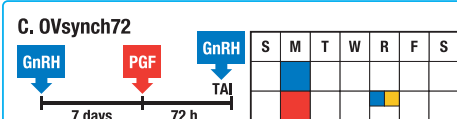
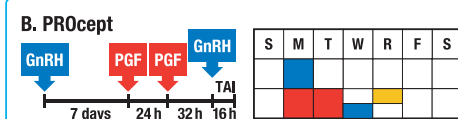
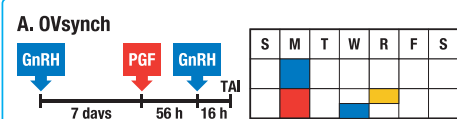
## Cow Synchronization Protocols

### Presynchronization methods used before Timed AI



**EDAI**  
PGF = prostaglandin F2α.  
GnRH = gonadotropin-releasing hormone.  
**Intensity of purple color within EDAI** denotes periods to expect most cows in estrus. Most cows come into estrus 2 to 7 d after PGF.

### OVsynch methods used for TAI

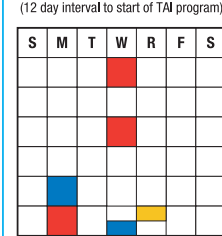


PGF GnRH TAI  
Afternoon GnRH, morning TAI Morning GnRH, morning TAI Morning GnRH, afternoon TAI

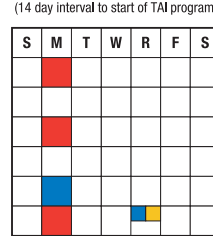
A CIDR can be used with any of these programs (CIDR OvSynch). The CIDR is inserted at first GnRH and removed at PGF. An example would be CIDR\_OvSynch56.

## Presynchronization-Ovsynch Calendars

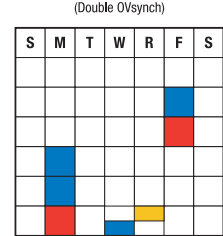
### 2xPGF/OvSynch56 (12 day interval to start of TAI program)



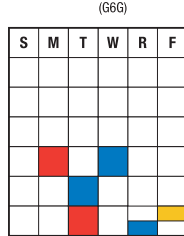
### 2xPGF/Cosynch72 (14 day interval to start of TAI program)



### GnRH-PGF-GnRH/OvSynch56 (Double OvSynch)

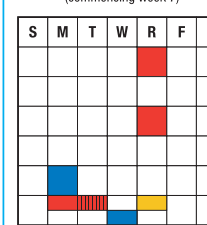


### GnRH-PGF/OvSynch56 (G6G)

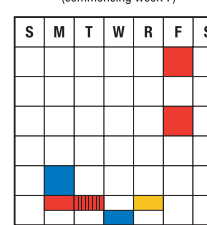


## Alternative breeding programs

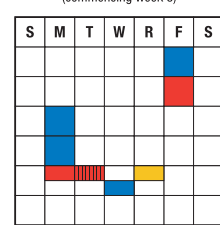
### Pre-Synch-11 for 1st AI (commencing week 7)



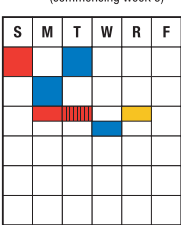
### Pre-Synch-10 for 1st AI (commencing week 7)



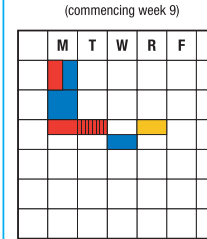
### Double OvSynch for 1st AI (commencing week 8)



### G6G for 1st AI (commencing week 9)



### PG+G for 1st AI (commencing week 9)

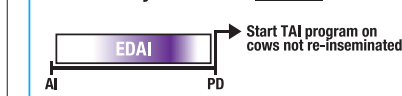


PGF PGF (2+ parity) GnRH TAI CIDR EDAI PD

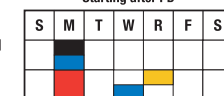
The black rectangle denotes PD. PGF is administered to cows diagnosed open (not pregnant). Pregnant cows are not treated. A CIDR can be used in a resynch program according to the instructions on page 1.

## Resynch methods

### A. Start OVsynch method after PD

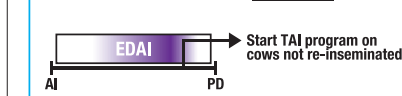


### Example: OVsynch56 Starting after PD



**Intensity of purple color within EDAI** denotes periods to expect most cows in estrus during EDAI. Open cows are typically observed in estrus on days 20 to 25 after AI. Nomenclature: The interval in days from previous AI to the start of the resynch program (first GnRH) is denoted in front of the program (d32OVsynch56, etc.).

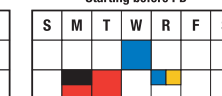
### B. Start timed AI method before PD



### Example: OVsynch56 Starting before PD



### Example: 5dCosynch72 Starting before PD

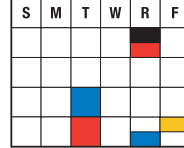


\*PGF is given to open cows (not pregnant). Pregnant cows are not treated after PD

### C. 1xPGF/OvSynch



### Example: 1xPGF/OvSynch56



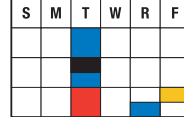
The 1xPGF/OvSynch program can be used with any OvSynch method.

PGF is administered to cows that have not been inseminated and are diagnosed open at PD. The intensity of purple color within EDAI denotes periods to expect most cows in estrus during EDAI. Open cows are typically observed in estrus on days 20 to 25 after AI or 2 to 7 d after PGF.

### D. GnRH/OvSynch



### Example: GnRH/OvSynch56



The GnRH/OvSynch program can be used with any OvSynch method.