



Estrus Synchronization in Dairy Heifers

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Benefits of Estrus Synchronization

- Artificial insemination versus bull breeding
 - a) Faster genetic gain

- Better management of AI programs for replacement heifers
 - a) No need for estrus detection
 - b) Better use of farm help
 - c) Reduced cost of handling and farm help

Estrumate/lutalyse only

Will work if heifers are cycling (have a CL)

- Reproductive tract scoring will help

Plan A

PGF



Detect estrus
breed 5 days



Only 2/3rd come in heat

Plan B

PGF



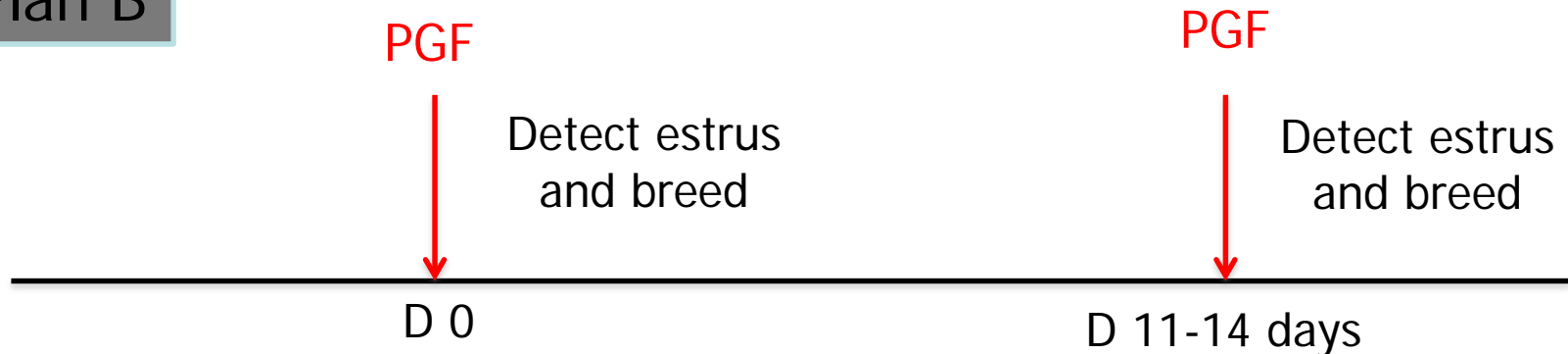
Detect estrus
breed 4 days

Detect estrus
breed 5 days



One PGF not working, how about two?

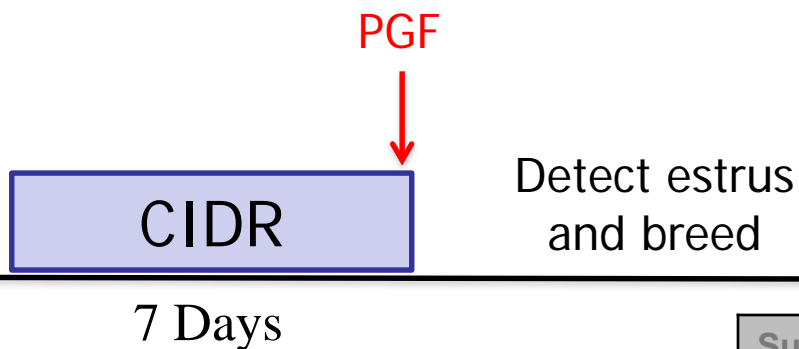
Plan B



Limitations:

- Cycling (with CL) animals
- Not that synchronous

CIDR (vaginal device) + estrumate/lutalyse

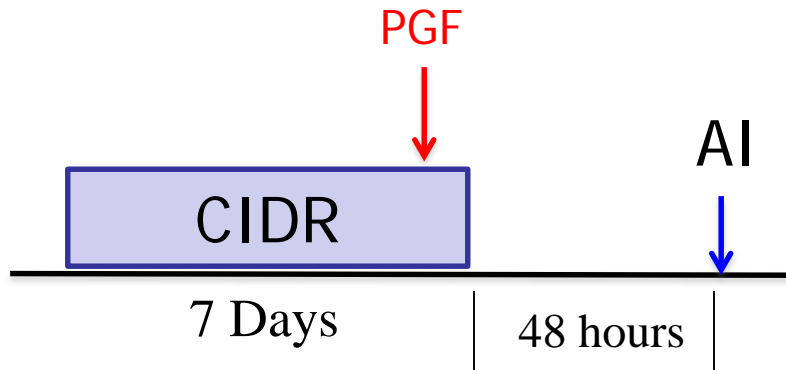


Sun	Mon	Tue	Wed	Thu	Fri	Sat
	<u>9 am</u> Place CIDR					
	<u>9 am</u> Remove CIDR PGF		<u>Detect estrus and AI</u>			

Most useful for:

- Non-cycling heifers

CIDR (vaginal device) + estrumate/lutalyse

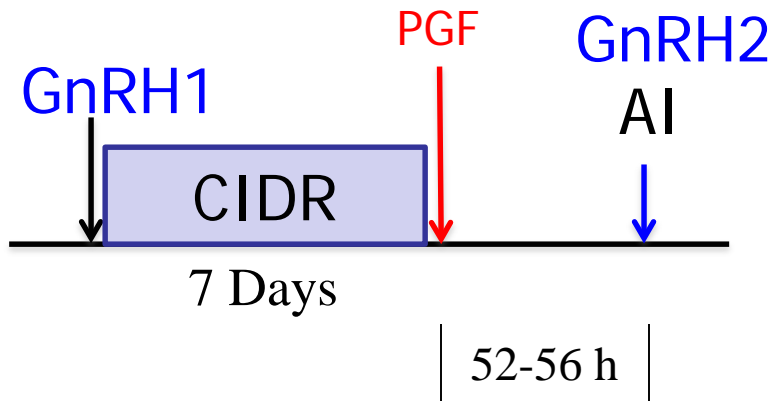


Sun	Mon	Tue	Wed	Thu	Fri	Sat
		<u>9 am</u> Place CIDR				
	<u>9 am</u> PGF	<u>9 am</u> Remove CIDR		<u>9 am</u> AI		

Conception rates

- 50-54%

7-day CoSynch protocol

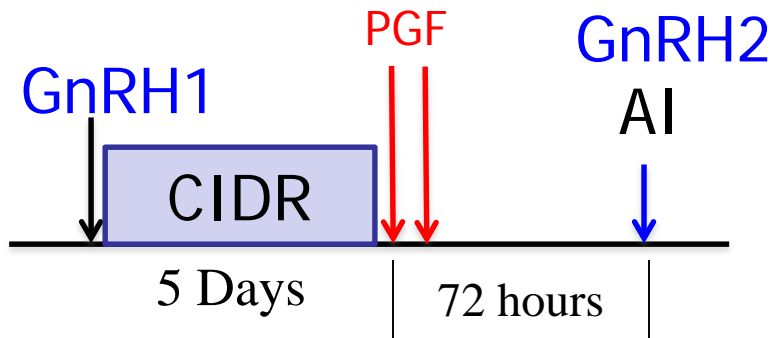


Varied results

- Lower conception rates than cows
- Conception rates 40-50%

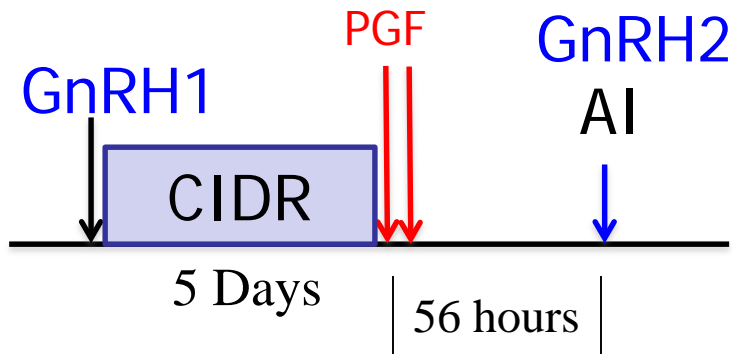
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	<u>9 am</u> Place CIDR GnRH1					
	<u>9 am</u> Remove CIDR PGF		<u>1-5 pm</u> AI GnRH2			

5-day CoSynch protocols



Sun	Mon	Tue	Wed	Thu	Fri	Sat
				<u>8 am</u> Place CIDR GnRH1		
		<u>8 am</u> Remove CIDR PGF <u>8 pm</u> PGF			<u>8 am</u> AI GnRH2	

5-day CoSynch protocols



Sun	Mon	Tue	Wed	Thu	Fri	Sat
				<u>9 am</u> Place CIDR GnRH1		
		<u>9 am</u> Remove CIDR PGF <u>3 pm</u> PGF		<u>5 pm</u> AI GnRH2		

Double PGF versus Single PGF

- Conception rate: 62% versus 54%
- 15-16 month heifers: 59%
- 17-18 month heifers: 47%

Troubleshooting a protocol that did not work?

- Most protocols: conception (pregnancy/AI) rates 50-65%
 - >55% is good
- Look at records (100% compliance is needed)
 - timing of hormones/AI
 - expired hormones
- Were the heifers cycling before the start of the protocol?
- Nutritional management
- AI technician, semen quality

Questions