

# More Details on How to Use the Multigroup Synch Planner



**Estrus Synchronization Planner**

**Beef Reproduction Task Force** *synch 18 - multigroup edition*

**For help, comments and suggestions contact:**

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or  
Dr. Sandy Johnson, Kansas State University [sandyj@ksu.edu](mailto:sandyj@ksu.edu)

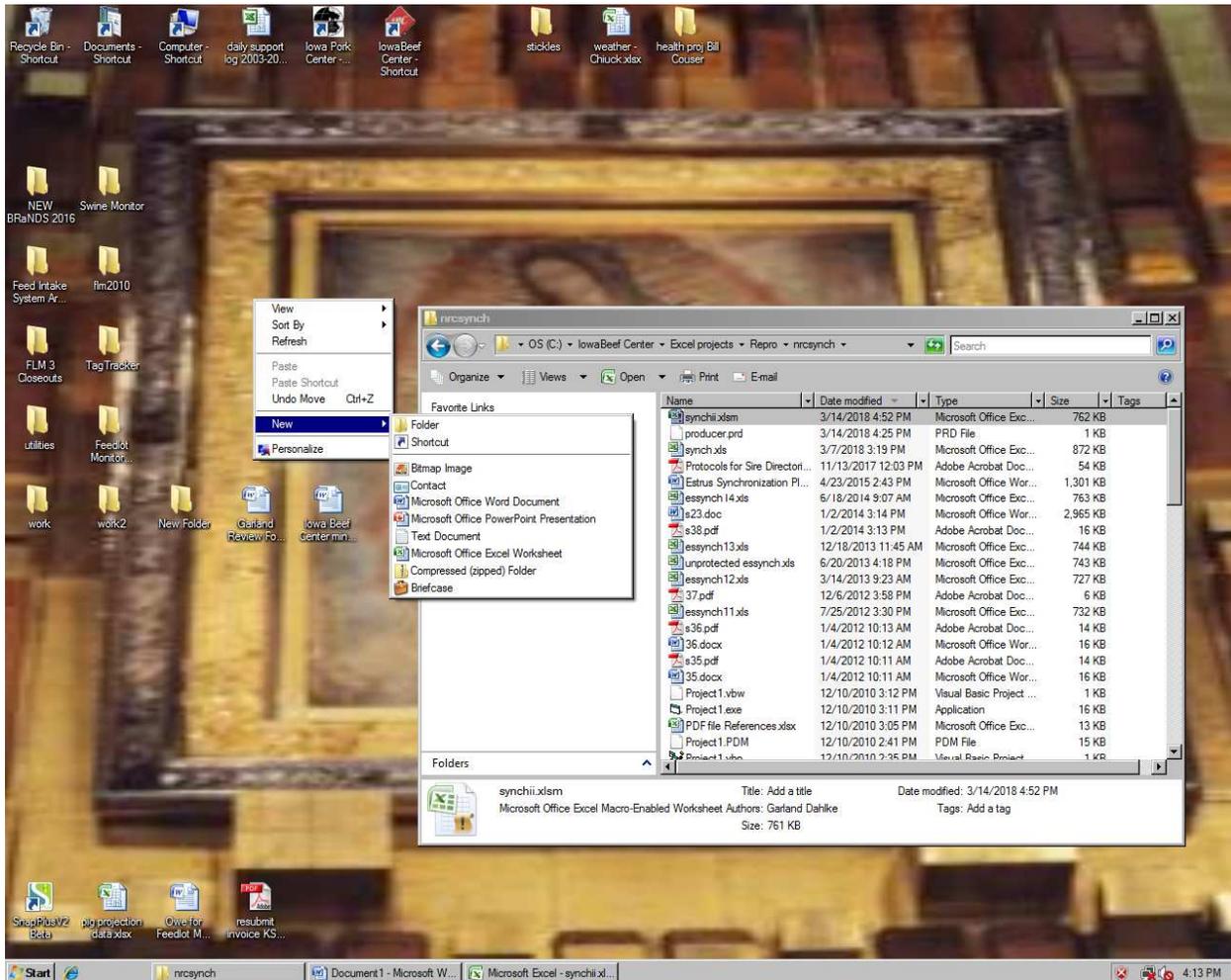
**For updates & supporting documents go to:** [www.iowabeefcenter.org/estrussynch.html](http://www.iowabeefcenter.org/estrussynch.html)  
<https://beefrepro.unl.edu/>



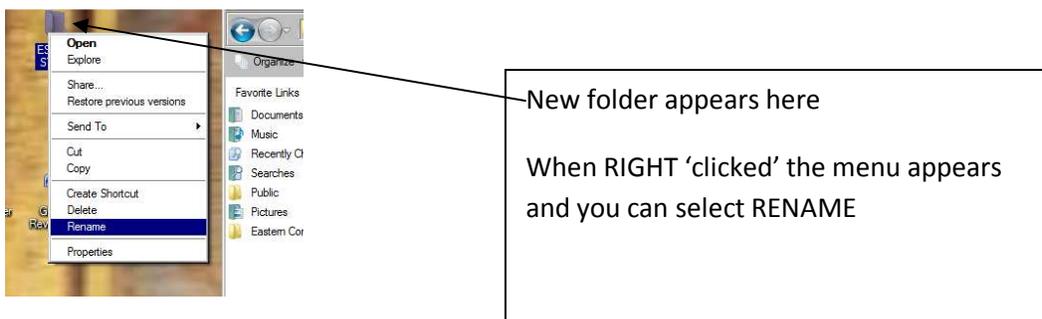
IOWA STATE UNIVERSITY  
Extension and Outreach  
Iowa Beef Center

**KSTATE**  
Kansas State University  
Research and Extension

## Create a Folder on your Desktop

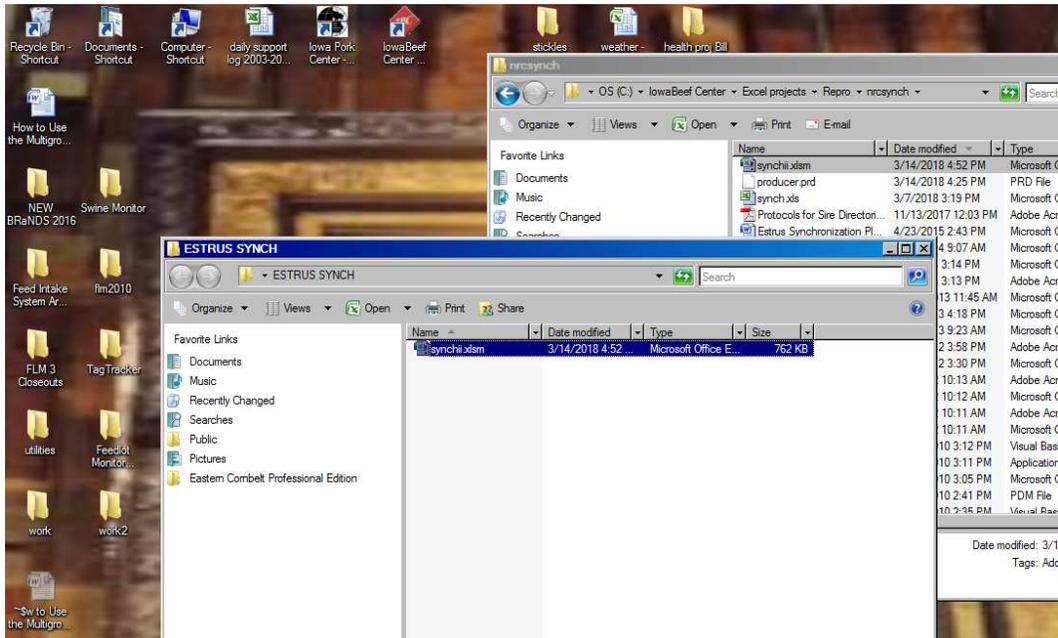


1. On your Computer desktop 'click' your RIGHT mouse button.
2. You will get a pop up menu appearing (as shown above) – then select NEW followed by FOLDER
3. You may name this folder ESTRUS SYNCH (as shown below) by RIGHT 'clicking' the folder, selecting RENAME and then typing in the name.



4. Now with the downloaded file (named “synchii.xlsm”, drag it into this folder

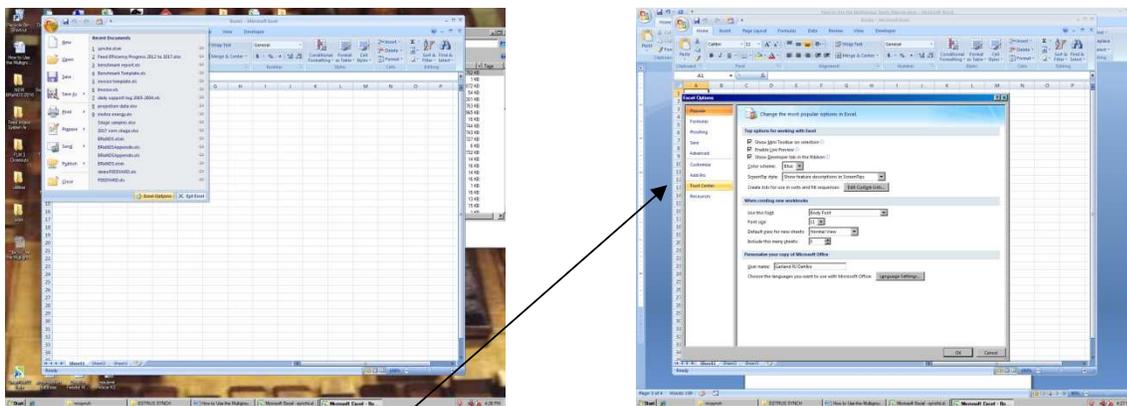
5. To run the program, all you need to do is ‘double click’ this file



## Allow Excel to Run this Application on your Computer

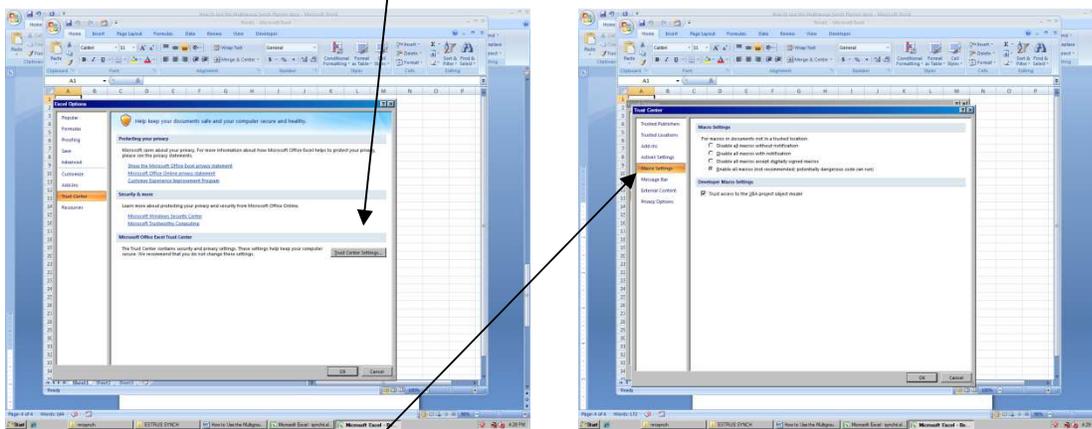
Because the Synch Planner is an Excel based program with some underlying nonExcel code you will need to give your computer permission to run this program. To do this:

1. **Before opening your Synchii Planner**, open an empty Excel sheet and go to the FILE – Excel OPTIONS area



2. Select the TRUST CENTER

### 3. Select TRUST CENTER SETTINGS button



### 4. Select MACRO SETTINGS

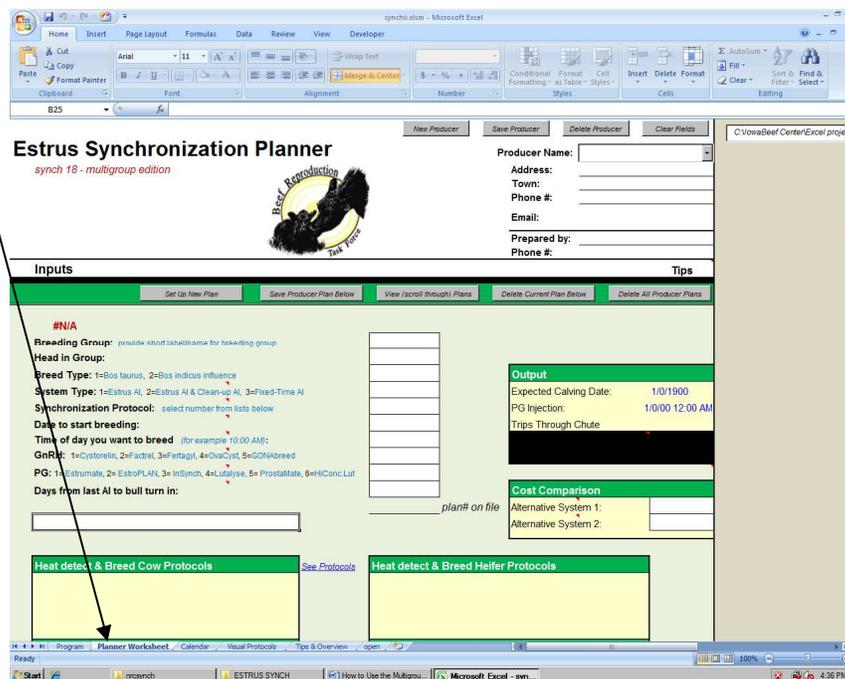
5. Check the 'Enable Macros' radio button that you are comfortable with

6. Check the "TRUST ACCESS TO VBA PROJECT OBJECT MODEL"

7. Close Excel and now OPEN your Synchii program.

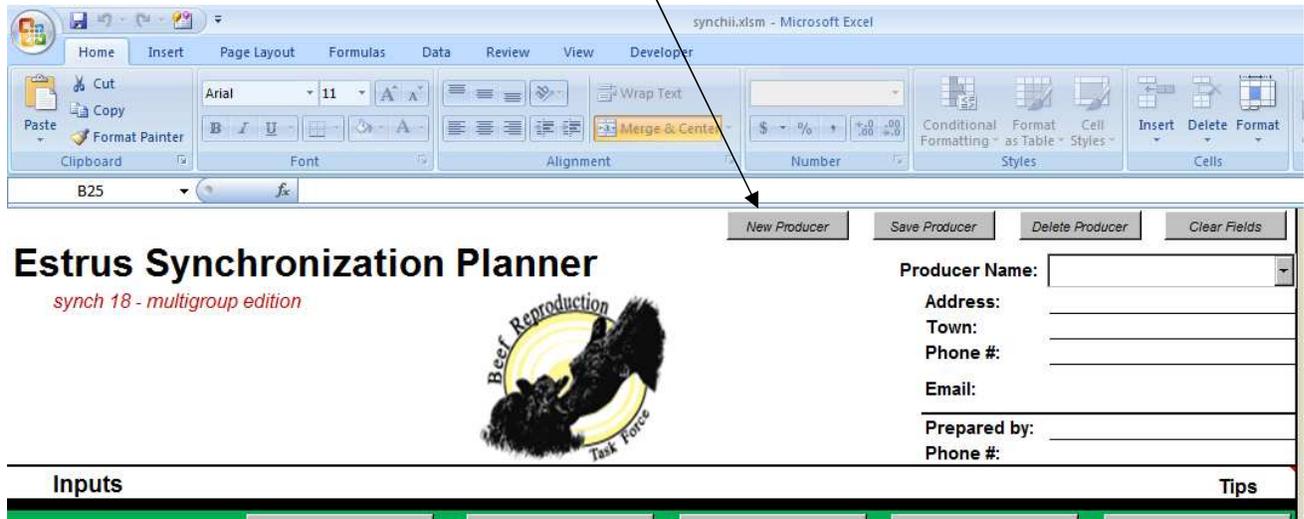
## Using the Multigroup Synch Planner – Set Up Producers

1. Select the PLANNER WORKSHEET tab at the bottom and the following page will appear.



2. You may set up specific producers if you will schedule synchronization protocols with multiple locations or producers. Do this by:

- A. Select the NEW PRODUCER button
- B. Type in the producer (or location name), the other details are optional.
- C. Select the SAVE PRODUCER button.



3. Now each time you want to work with a specific producer or location go to this list and select the individual prior to setting up or editing the synch plans.

# Using the Multigroup Synch Planner – Set Up Protocols

1. With the producer selected, scroll down and select the button SET UP NEW PLAN.
2. Provide the inputs required as shown in the following image.
3. Select the SAVE PRODUCER PLAN button. The screen will clear automatically and you may enter another plan

**Estrus Synchronization Planner**  
*synch 18 - multigroup edition*

**Beef Reproduction Task Force**

**Inputs**

**Set Up New Plan** | Save Producer Plan Below | View (scroll through) Plans | Delete Current Plan Below | Delete All Producer Plans

**Breeding Group:** provide short label/name for breeding group  
**Head in Group:**  
**Breed Type:** 1=Bos taurus, 2=Bos indicus influence  
**System Type:** 1=Estrus AI, 2=Estrus AI & Clean-up AI, 3=Fixed-Time AI  
**Synchronization Protocol:** select number from lists below  
**Date to start breeding:**  
**Time of day you want to breed** (for example 10:00 AM):  
**GnRH:** 1=Cystorelin, 2=Fadrel, 3=Fertagyl, 4=OvaCyst, 5=CONAbreed  
**PG:** 1= Estrumate, 2= EstroPLAN, 3= InSynch, 4=Lutalyse, 5= ProstaMate, 6=HiConcLut  
**Days from last AI to bull turn in:**

mature cows	plan# on file
25	
1	
3	
29	
06/28/2018	
10:00 AM	
1	
4	
20	

**Output**

Expected Calving Date: 1/0/1900  
CIDR removal: 6/25/18 10:00 AM  
Trips Through Chute: 4  
Head Worked per hour (AI): 30  
Group Size (head): 25

**Cost Comparison**

Alternative System 1:  
Alternative System 2:

**Fixed-Time AI Cow Protocols** See Protocols

22 = 7 Day CO-Synch+CIDR with Fixed-Time AI 63 +/-3  
29 = 5 Day CO-Synch+CIDR with Fixed-Time AI 72 +/-2

**Fixed-Time AI Heifer Protocols**

23 = 7 Day CO-Synch+CIDR with Fixed-Time AI 54 +/- 2  
27 = MGA + PG with Fixed-Time AI 72 +/-2  
32 = 14 Day CIDR+PG with Fixed-Time AI 66 +/-2  
38 = 5 Day CO-Synch+CIDR with Fixed-Time AI 60 +/- 4

4. If you want to review the plans saved or make edits to what you have saved, select the VIEW PLANS button. Each time you 'click' it, it will show you the next plan saved starting with the first.
5. If you want to change something, provide the change and select SAVE PRODUCER PLAN.
6. If you want to remove a plan, select the DELETE CURRENT PLAN button
7. If you want to start over and save a new set of protocols, select the DELETE ALL PRODUCER PLANS button and then redo what needs to be done.

**Inputs**

Set Up New Plan | Save Producer Plan Below | View (scroll through) Plans | Delete Current Plan Below | Delete All Producer Plans

**Breeding Group:** provide short labelName for breeding group  
**Head in Group:** [input field]  
**Breed Type:** 1=Bos taurus, 2=Bos indicus influence  
**System Type:** 1=Estrus AI, 2=Estrus AI & Clean-up AI, 3=Fixed-Time AI  
**Synchronization Protocol:** select number from lists below  
**Date to start breeding:** [input field]  
**Time of day you want to breed (for example 10:00 AM):** [input field]  
**GnRH:** 1=Cystorelin, 2=Factrel, 3=Fertagyl, 4=OvaCyst, 5=GONAbreed  
**PG:** 1= Estrumate, 2= EstroPLAN, 3= InSynch, 4=Lutalyse, 5= ProstaMate, 6=HiConcLut  
**Days from last AI to bull turn in:** [input field]

mature cows
25
1
3
29
06/28/2018
10:00 AM
1
4
20

plan# on file

**Output**

Expected Calving Date: 1/0/1900  
 CIDR removal: 6/25/18 10:00 AM  
 Trips Through Chute: 4  
 Head Worked per hour (AI): 30  
 Group Size (head): 25

**Cost Comparison**

Alternative System 1: 22  
 Alternative System 2: 13

**Fixed-Time AI Cow Protocols** See Protocols

22 = 7 Day CO-Synch+CIDR with Fixed-Time AI 63 +/-3  
 29 = 5 Day CO-Synch+CIDR with Fixed-Time AI 72 +/-2

**Less Preferred Systems**

10 = CO-Synch with Fixed-Time AI\* 48 +/-2  
 13 = OvSynch\*  
 35 = PG 6 Day CIDR with Fixed-Time AI 69 +/-3

**Fixed-Time AI Heifer Protocols**

23 = 7 Day CO-Synch+CIDR with Fixed-Time AI 54 +/- 2  
 27 = MGA + PG with Fixed-Time AI 72 +/-2  
 32 = 14 Day CIDR+PG with Fixed-Time AI 66 +/-2  
 38 = 5 Day CO-Synch+CIDR with Fixed-Time AI 60 +/- 4

**Less Preferred Systems**

28 = CIDR Select with Fixed-Time AI 72 +/-2  
 36 = PG 6 Day CIDR with Fixed-Time AI 66 +/- 2

Note outputs listed here

Provide an estimate of the animals you can process per hour

Other systems can be indicated here to compare for cost.

Note that synch protocols for cows and heifers are listed here and are not the same with few exceptions.

## Evaluating the Protocol and Costs of the Plan in Place

After providing the inputs on the protocol that you wish to follow you may scroll down and provide some other details if you want to estimate the cost of the synch program that you will be implementing. Like above, the white colored boxes allow inputs. Unlike those inputs above, you do not need to provide an input here though.

If you scroll further down you will see the cost evaluation for the protocol and if you provided other systems to compare, they will also appear. Finally there is a chart showing the cost per pregnancy. Fixed Time protocols and those that use a "Clean Up AI" after some heat detection assume 100% insemination rate. The heat detection systems provide a chart showing different rates of insemination and subsequent pregnancy rates. Note that the Yardage charge is left off the chart.

A formatted report of the screens shown below can be generated by selecting PRINT from your Excel menu.

synchiasm - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Developer

Clipboard Font Alignment Number Styles Cells Editing

K28 =IF(G17=1,N6,IF(G17=2,N7,N8))

**Less Preferred Systems**

10 = CO-Synch with Fixed-Time AI 48 +/-2  
 13 = OvSynch\*  
 35 = PG 6 Day CIDR with Fixed-Time AI 69 +/-3

**Less Preferred Systems**

38 = 5 Day CO-Synch+CIDR with Fixed-Time AI 60 +/- 4  
 28 = CIDR Select with Fixed-Time AI 72 +/-2  
 36 = PG 6 Day CIDR with Fixed-Time AI 66 +/- 2

note

Head in group: 25	Forage: 20	5cc Lutalyse (\$/dose): \$2.80	\$0.060
Labor Estimate: 25.3 hours	Grain: 4	2cc Cystorelin (\$/dose): \$2.80	\$0.110
Labor Charge: \$13.50 \$/hour	MGA: 1	CIDR (\$/insert): \$11.00	\$0.200
Yardage: \$0.60 \$/hd/day	Supplement: 0.25	Semen (\$/unit): \$25.00	\$0.250

MGA Days: 0

Days in Drylot: 15

Days for System: 9

**User Defined Charges**

Name of Item: ultrasound	No.Units: 25	Cost - \$ /Unit: \$5.00
Name of Item: patches	No.Units: 40	Cost - \$ /Unit: \$2.00

**System: 29 = 5 Day CO-Synch+CIDR with Fixed-Time AI 72 +/-2**

**Comments**

This system works well in cows. No estrus detection required.  
 Fixed time AI can be done at 72 (+/- 2) hrs. after 1st PG injection.  
 All females require a GnRH injection at fixed-time AI.  
 This system can initiate estrous cycles in some noncycling females.  
 Expect lower fertility in cows less than 50 days postpartum at time of PG injection.  
 Two full doses of PG at least 6 hours apart are critical for success

Immediate addition of clean-up bulls could lead to questions about parentage.

Program Planner Worksheet Calendar Visual Protocols Tips & Overview open

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Optional inputs regarding costs of synchronization

Comments regarding the system that was chosen for synchronization

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Home Insert Page Layout Formulas Data Review View Developer

Clipboard Font Alignment Number Styles Cells Editing

K28 =IF(G17=1,N6,IF(G17=2,N7,N8))

System Cost Comparison:	29 = 5 Day CO-Synch+CIDR with Fixed-Time AI 72 +/-2	22 = 7 Day CO-Synch+CIDR with Fixed-Time AI 63 +/-3	13 = OvSynch		
<b>Cost Analysis:</b>	<b>Units</b>	<b>Cost/Unit</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>
5cc Lutalyse Cost	50.00	\$2.80	\$140.00	\$70.00	\$70.00
2cc Cystorelin Cost	50.00	\$2.90	\$145.00	\$145.00	\$145.00
MGA Supplement	0.00	\$0.200	\$0.00	\$0.00	\$0.00
CIDR Cost	25.00	\$11.00	\$275.00	\$275.00	\$0.00
<b>Synchronization Cost Subtotal</b>			<b>\$560.00</b>	<b>\$490.00</b>	<b>\$215.00</b>
Detect/Mgt.Labor	25.3	\$13.50	\$341.55	\$295.79	\$341.55
Semen	25	\$25.00	\$625.00	\$625.00	\$625.00
ultrasound	25	\$5.00	\$125.00	\$125.00	\$125.00
patches	40	\$2.00	\$80.00	\$80.00	\$80.00
			\$0.00	\$0.00	\$0.00
<b>AI Cost Subtotal</b>			<b>\$1,171.55</b>	<b>\$1,125.79</b>	<b>\$1,171.55</b>
<b>Total Cost (not including feed &amp; yardage)</b>			<b>\$1,731.55</b>	<b>\$1,615.79</b>	<b>\$1,386.55</b>
<b>Cost / Female Synchronized</b>			<b>\$69.26</b>	<b>\$64.63</b>	<b>\$55.46</b>
<b>Drylot Costs:**</b>					
Days in Drylot			15		
Forage (units = lbs)	7,500	\$0.060	\$450.00		
Grain (units = lbs)	1,500	\$0.110	\$165.00		
Yardage (units = hd-days)	375	\$0.600	\$225.00		
Other Supplement (units = lbs)	94	\$0.250	\$23.44		
<b>Feed &amp; Yardage Cost Subtotal</b>			<b>\$863.44</b>		
<b>Drylot Cost per Head per Day</b>			<b>\$2.30</b>		
<b>Total Cost / Female Synchronized</b>			<b>\$103.80</b>		

\*\*Pasture charge not included

Program Planner Worksheet Calendar Visual Protocols Tips & Overview open

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Cost of the protocol selected and if other systems are to be compared, their costs are shown as well in a side by side comparison.

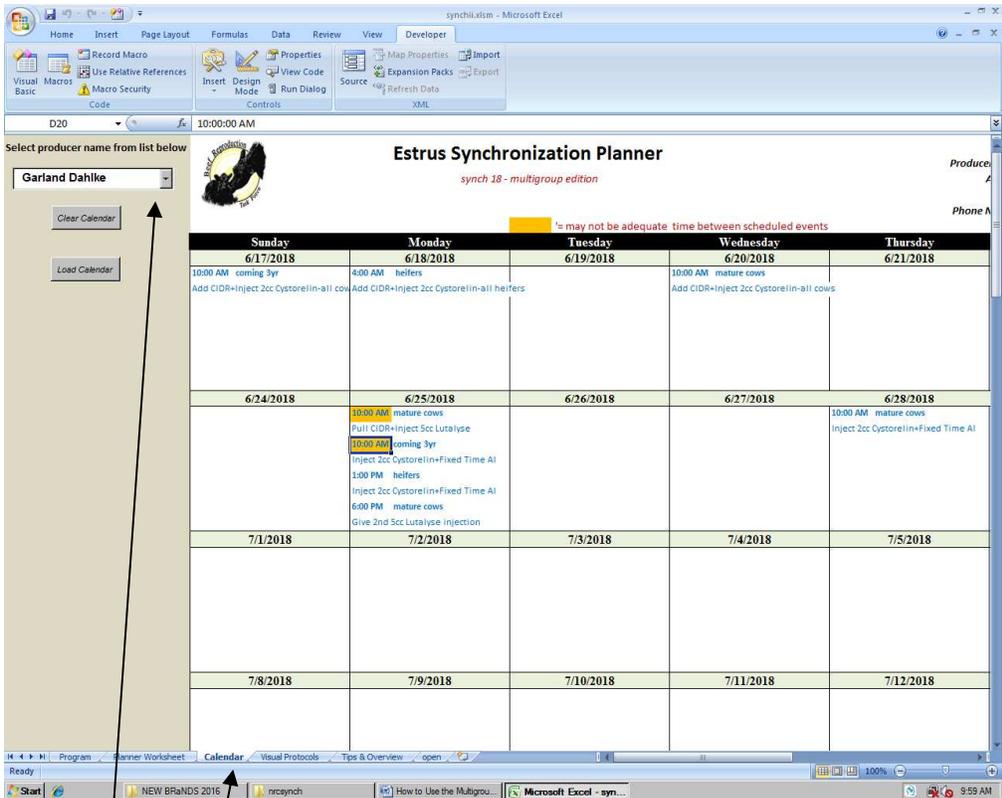
The charges for days in a dry lot are shown only for the selected system.

Estrous Response		Conception Rate of those Responding to Synchronization				
Rate		35%	45%	55%	65%	75%
100%	% AI Pregnant	35.0%	45.0%	55.0%	65.0%	75.0%
	\$ per Synch AI Pregnancy	\$197.89	\$153.92	\$125.93	\$106.56	\$92.35
0%	% AI Pregnant	0.0%	0.0%	0.0%	0.0%	0.0%
	\$ per Synch AI Pregnancy	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0%	% AI Pregnant	0.0%	0.0%	0.0%	0.0%	0.0%
	\$ per Synch AI Pregnancy	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0%	% AI Pregnant	0.0%	0.0%	0.0%	0.0%	0.0%
	\$ per Synch AI Pregnancy	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
0%	% AI Pregnant	0.0%	0.0%	0.0%	0.0%	0.0%
	\$ per Synch AI Pregnancy	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
		Excludes Yardage+Feed = \$34.54 per head.				

The cost shown on the chart is the cost per pregnancy less the yardage or pasture charge.

The total yardage charge per head is shown at the bottom.

### Printing the Synch Calendar



1. Select the CALENDAR tab
2. Select the Producer/ Location from the Producer List
3. Select the LOAD CALENDAR button.

You may scroll through the three page summary after loading the calendar or you may print it. To print, go to your Excel menu and select the PRINT item from the Excel menu. The first page of the calendar generally is the one most loaded with details, the second page has the overflow. The third page gives a summary of the systems used/ shown on the calendar along with the requirement for pharmaceuticals, probable time for each event for the given group.

Be sure to go through the calendar and look for conflicts. The printout will flag the most obvious conflicts with the 'orange' box on the conflicting times on a given date, but you will need to use good sense in making sure the other times are with adequate time allotments to carry out your tasks properly.

Please note, timing is as critical as technique in getting a good response from synchronization. However, there is enough 'wiggle' room to start an hour earlier and end in the hour following from the hour displayed on the calendar and still maintain good results



### Estrus Synchronization Planner

synch 18 - multigroup edition

Producer Name: Garland Dahlke  
 Address: 113 Kildee Hall ISU  
 Town: Ames IA 5001  
 Phone Number: 515 294 9910  
 Email: gdahlke@iastate.edu

\* may not be adequate time between scheduled events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
6/17/2018 10:00 AM coming 3yr Add CIDR+Inject 2cc Cyclosetin all cows	6/18/2018 9:00 AM heifers Add CIDR+Inject 2cc Cyclosetin all heifers	6/19/2018	6/20/2018 10:00 AM mature cows Add CIDR+Inject 2cc Cyclosetin all cows	6/21/2018	6/22/2018 10:00 AM coming 3yr Pull CIDR+Inject 2cc Lactalyse 6:00 PM coming 3yr Give 2nd Sec Lactalyse injection	6/23/2018 9:00 AM heifers Give 2nd Sec Lactalyse injection 6:00 AM heifers Pull CIDR+Inject 2cc Lactalyse
6/24/2018	6/25/2018 10:00 AM mature cows Pull CIDR+Inject 2cc Lactalyse 10:00 AM coming 3yr Inject 2cc Cyclosetin+Fixed Time AI 1:00 PM heifers Inject 2cc Cyclosetin+Fixed Time AI 6:00 PM mature cows Give 2nd Sec Lactalyse injection	6/26/2018	6/27/2018	6/28/2018 10:00 AM mature cows Inject 2cc Cyclosetin+Fixed Time AI	6/29/2018	6/30/2018
7/1/2018	7/2/2018	7/3/2018	7/4/2018	7/5/2018	7/6/2018	7/7/2018
7/8/2018	7/9/2018	7/10/2018	7/11/2018	7/12/2018	7/13/2018 * coming 3yr Return to Estrus	7/14/2018 * heifers Return to Estrus
7/15/2018 * coming 3yr Turn in Bull Power * heifers Turn in Bull Power	7/16/2018 * mature cows Return to Estrus	7/17/2018	7/18/2018 * mature cows Turn in Bull Power	7/19/2018	7/20/2018	7/21/2018

1

Iowa Beef Center - Estrus Synch Planner
3/16/2018

29	mature cows	Head 25	Hrs/Run 0.83
System	29 = 5 Day CO-Synch+CIDR with Fixed-Time AI 72 +/-2		
PG	50 doses	GnRH 50 doses	CIDRS 25
Notes			

29	coming 3yr	Head 10	Hrs/Run 0.33
System	29 = 5 Day CO-Synch+CIDR with Fixed-Time AI 72 +/-2		
PG	20 doses	GnRH 20 doses	CIDRS 10
Notes			

38	heifers	Head 10	Hrs/Run 0.33
System	38 = 5 Day CO-Synch+CIDR with Fixed-Time AI 60 +/-4		
PG	20 doses	GnRH 20 doses	CIDRS 10
Notes			