TECH NOTE: Pregnancy hardcount by sire (or stud) of conception in DC305

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With the success of the InFocus program we have seen an increased interest in pregnancy hardcount by sire of conception. Remember, the BREDSUM command in DC305 is not a good way to look at projected pregnancies due to the inclusion of culled cow and abortions. In addition, using the DC305 herd inventory projection (ECON\IR) is also not a good way to get a pregnancy hardcount for future months as it assumes all female offspring are suitable for dairy and the female calf rate is constant across all lactations.

Hence, a more useful table can be created using other commands that will be reviewed in this document. Nevertheless, be cautious with this, projection accuracy may vary depending on individual farm conditions. Among those conditions, abortion rate may have a big impact; the probability of pregnancy losses is higher in early stages of gestation length, while some disease outbreaks or heat stress can increase the risk unexpectedly. Consequently, I would suggest projecting 100 + day pregnancies to reduce the chances of pregnancy losses and therefore the error. Furthermore, keep in mind that particular farms have high rates of stillbirths (DOA’s) and calf mortality. Thus, the projected female calves based on the number of expected calving may change dramatically after parturition.

Generating the values in order to project freshenings can be done two ways in DC305. First, items can be created in ALTER and then commands ran (should only do this on your DC305) or second, items are only created as items-on-the-fly. This means that they aren’t taking up space on a customer’s item list in DC305 and you aren’t at risk of deleting or editing an item that is necessary for a customer to monitor and track his dairy management. It is also a quick way to ensure you have the right item as items are often labeled very similarly. Realize this specific item definition will not be stored and will need to be recalled whenever you need to utilize it. Please click on the appropriate way you’d like to proceed, create items or create items-on-the fly.
January 2nd, 2014

Creating items to collect required data from DC305.

We need to create three items to be able to pull the right data out of DC305; Stud of Sire of Conception, Breed of Sire of Conception and Month of Due Date.

1. **STUD OF SIRE OF CONCEPTION**
   a. Type: ALT\2
   b. Click Add item or hit Insert button on keyboard
   c. Create the character name **STUDC**. If this is already taken as a different item, please choose a different name (up to 5 characters). Press Enter.
   d. Select item type 190 (sire). Press Enter.
   e. A new window will open for choosing Op1. Select the sire that cow is pregnant to (SIRC) from the item list. Press Enter.
   g. Finally, create a description that will help you to remember the information this item will collect: Stud of current sire of concept. Press Enter.
2. BREED OF SIRE OF CONCEPTION
   a. Follow steps 1 through 5 of the previous item. However, name this new item SCBRE.
   b. After choosing the Op1, the small window will open again, select option 4 Breed. Press Enter.
   c. Finally, specify a description of the meaning of this new item. Current Sire of Concept Breed. Press Enter.

3. MONTH DUE: Assuming the default DC305 gestation length
   a. Create the character name MDUE. Press Enter.
   b. Select item type 130 (mmyy date format). Press Enter.
   c. For Op1, select due date (DUE). Press Enter. This item will not use Op2, so press Enter again.
   d. Finally, write a description explaining the information this new item will collect. Due date in months. Press Enter.
January 2nd, 2014

Creating items-on-the-fly to collect required data from DC305.

Stud of Sire of Conception (STUDC) item-on-the-fly is \%190.SIRC.5.STUDC
Breed of Sire of Conception (SCBRE) item-on-the-fly is \%190.SIRC.4.SCBRE
Month of Due Date (MDUE) item-on-the-fly is \%130.DUE.0.MDUE

Extracting the data from DC305.

Below you will find commands to help you extract the data you need to project freshenings. Note, this doesn’t explain how to portray and/or mine your data in a report or Excel.

With the new items created, the following commands will help you extract the raw data to be analyzed at a later time. Often heifers (nulliparas) and cows have different breeding protocols. For instance sorted semen is rarely used in cows. Thus we will pull separate data for each population. Please note created item commands are in **BLUE** and item-on-the-fly commands are in **RED**

For heifers use:

SHOW ID DUE MDUE DCC SIRC STUDC SCBRE DOWNBY DCC FOR DCC>100 LACT=0
SHOW ID DUE \%130.DUE.0.MDUE DCC SIRC \%190.SIRC.5.STUDC \%190.SIRC.4.SCBRE DOWNBY DCC FOR DCC>100 LACT=0

For cows use:

SHOW ID DUE MDUE DCC SIRC STUDC SCBRE DOWNBY DCC FOR DCC>100 LACT>0
SHOW ID DUE \%130.DUE.0.MDUE DCC SIRC \%190.SIRC.5.STUDC \%190.SIRC.4.SCBRE DOWNBY DCC FOR DCC>100 LACT>0

To the above commands you can add any other desired items or change the FOR statements to make it more specific to a particular group of animals. Specifically, if you want to only show the cows that are pregnant to an Angus (AN) sire, you can add \%190.SIRC.4.SCBRE>AN or SCBRE>AN after the FOR statement.

If you want to export the data from the command, click on the icon marked with the red arrow below. The information will then be exported to Excel. Save the file as a .XLS file. In Excel you can now sort, tabulate and graph by month due, stud code and sire of conception’s breed to project the expected calving, expected sex ratio, number of crossbred and purebred calves for the next seven to nine months.
January 2nd, 2014

It is important to mention that this requires the breedings to be entered with NAAB codes. If bulls of natural service are used, STUDC will be “0” and SCBRE will be “–”. The stud numbers and breed abbreviations will be the same you are used to work with.

DC305 SUMMARY TABLES BY MONTH DUE, BREED AND STUD OF SIRE OF CONCEPTION

One example of summarized information from DC305 can be accessed using the following commands:

For heifers, use the below command where the current age is included as optional:

```
SUM DCC AGE STUDC BY SCBRE MDUE FOR DCC>100 LACT=0
SUM DCC AGE %190.SIRC.5.STUDC BY %190.SIRC.4.SCBRE %130.DUE.0.MDUE FOR DCC>100 LACT=0
```

For cows:

```
SUM DCC STUDC BY SCBRE MDUE FOR DCC>100 LACT>0
SUM DCC %190.SIRC.5.STUDC BY %190.SIRC.4.SCBRE %130.DUE.0.MDUE FOR DCC>100 LACT>0
```

Although it isn’t perfect, the breed code will be repeated for each individual bull. In other words, instead of listing each specific cow, it will list a summary of all the cows pregnant with each specific Holstein (or other breed) bull. The table will be broken down by month due and the stud will be specified as an average for each specific breed bull. The Count column represents the number of animals in each table row and it’s the information you want to track for projections.

An example is presented below. The table is on the Report view instead of Grid to facilitate reading.

In this example 24 cows will freshen in December of 2013. All of them are pregnant to ABS bulls (29). Of the 24, a total of 6 cows are pregnant to an ABS Angus bull (AN) and 1 to an ABS Jersey bull (J). The others, 17 animals, are pregnant to 6 ABS Holstein (H) bulls. Ignore the Pct column as it represents all the animals in the tables not just that one month.

I hope this provides you with a way to pull data out to look at herd inventory projections. Please remember although a cow is pregnant to InFocus semen at breeding time, that doesn’t necessarily mean there will be an InFocus calf on the ground in 9 months. Culling, abortion and stillborn rates play a large factor into this, which seems to affect these lower end cows even more than the other cows in the herd.

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