Dairy One News
Where Information Creates Opportunity

Dairy Comp 305 Newsletter

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From the office of Valley Ag. Software
Fourth Quarter – 2010

As 2010 draws to a close, we reflect back on it as a year the dairy industry has had many "ups-and-downs". At Valley Ag Software, we look at it as a year of change – primarily as a year of working together with Koepon Holding Company and being a sister company under that organization to Alta Genetics. As such it has been a good year. With Koepon's help we have made several internal changes that are helping us get better organized to provide improved support and assistance to our customers, become more efficient internally in our use of the time each of us is given every day and have been given encouragement to expand our customer contacts. As a company we have thus spent more on travel than ever before and have seen the benefits of this activity already. Koepon has also opened some doors to foreign markets that we hope will be a big gain to VAS in the long run.

Regarding DC305, we've continued to make changes that we believe will help our customers to improve and handle the management challenges they face (or will face) in the future. These are outlined in this newsletter. We are also making some changes in DC305 that will allow for expanded data that will become available in the near future. These changes we hope to implemented in the first 6 months of 2011 for those who need them.

Genomics and Dairy Comp

There is no question that the advent of genomics is the most important advancement in genetics in our lifetime. The industry has responded world-wide by rapid adoption of these tools. It is now difficult to find a dairy still using proven bulls, as the genetic improvement has increased so fast that many genomic young bulls are superior to all but the very best proven bulls. Indeed, many of the studs eliminated the vast majority of their bulls-in-waiting as soon as they received their genomic data. In short, our genetic gain on the sire side has increased 3-4 times what it has been in the past.

The SIRES command in Dairy Comp has long been able to assist dairy farms in making genetic decisions, but it has likely been ignored by many because of a belief that genetics was not a limiting constraint on their farm. On some farms, it is easy to see the impact of sire selection with the following commands.

On other farms, it is impossible to see any impact of the sire genetics. Why? Because of inaccurate sire identification. This can occur with purchased animals or calves born and then assigned to the wrong dam.

Does the PTA of the sire influence daughter performance?

1. Import the PTA milk from the NAAB (or local) sire data base: **SIRES COD2:PTAMilk**
   You can create and use an item SPtaM instead of COD2 if you wish to save these values.

2. Look at the relationship between Sire PTA and daughter milk yield for first lactation animals:
   GRAPH M305 BY COD2 FOR SID<>0 LACT=1 DIM>100 \R
   The slope of the regression line shows the heritability for milk on your farm. That is, the amount of the actual milk yield that is controlled by the sire (again, assuming proper sire ID).
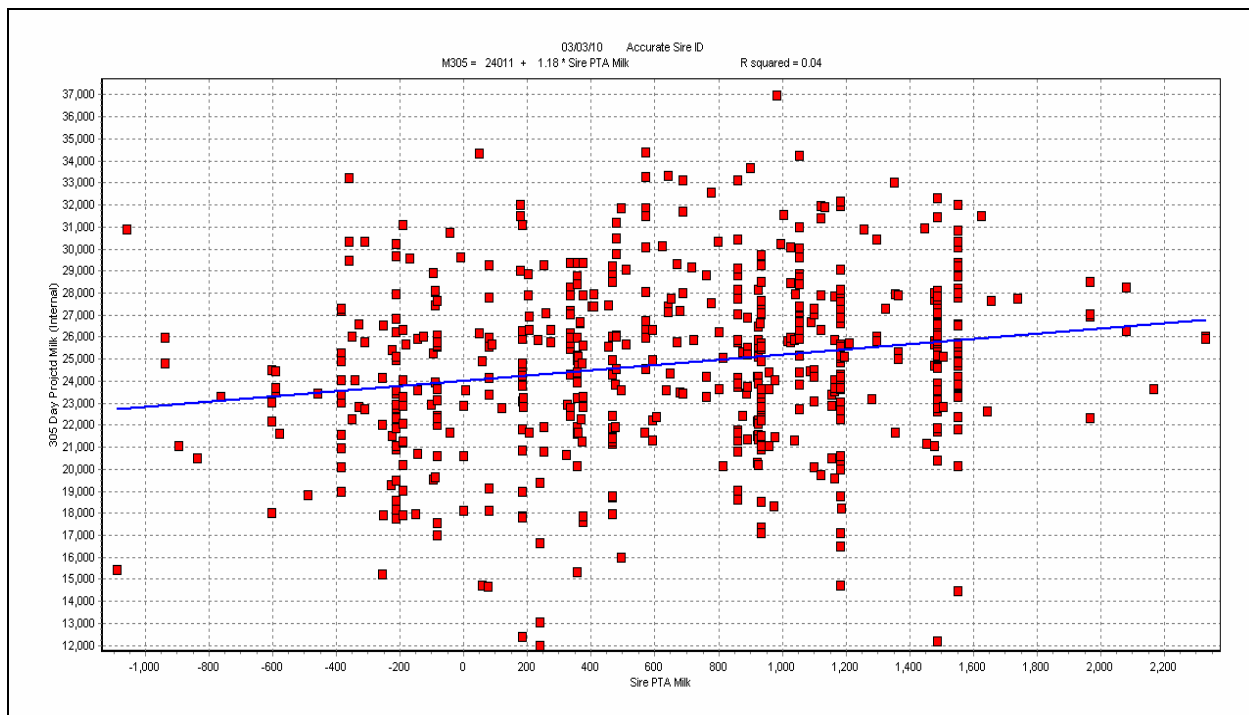
Or, for those that want to see these data numerically, compare the top and bottom quartiles of your herd:
SUM M305 DOWNBY SPTAM FOR SID<>0 LACT=1 DIM>100 \Q4

```
By SPTAM  Pct  Count Av M305
--------- ---- ------ -------
     1396   25    168   25537
      807   27    181   25293
      134   30    204   24179
     -275   18    120   23452
========= ==== ====== =======
Total      100    673   24783
```

Note that the difference between the top 25% of the sires is 1396+275=1671, and the difference is milk in their daughters is 25293-23452=1841. They get more than they paid for…

3. A similar approach can be used for Fat, Protein, and other measurable traits.

4. The estimate of the effect will be diminished in dairies that heavily cull LACT=1 cows, and in herds with poor sire IDs.

Of course, when we look at daughters, we are looking at breeding that happened well over three years ago. It is often instructive to see the expected performance of recently selected sires:

What has been the genetics being used for breeding in the recent past?
1. Look at just the semen used to breed adult cows:
   SIRES\8 FOR LACT>0

2. Look at just the semen used to breed heifers:
   SIRES\8 FOR LACT=0
   It is possible to select a date range for the breedings, and also to limit to 1 or more studs.

Identification		Production		Breed Assoc Type	
NAABCod		Rel	85	RelType	41
NAABNam		PTAMilk	74	PTAType	0.36
BullReg		PTAFat%	0.11	PTI	875
Breed		PTAFat	32	UddComp	+0.2
StudCod	0	PTAPtn%	0.03	RUddHt	+0.4
BullSir		PTAPtn	11	RUddWid	+0.3
		NM$	401	UddDep	+0.5
BullMGS		CM$	451	FUddAtt	+0.5
BirthDa	-	FM$	352	TeatPla	+0.1
Availab		PTASCS	2.82	RearLeg	-0.7
		PL	+3.6	Foot An	+0.7
				Stature	+0.1
Semen		SCEase	5	Strngth	+0.1
SemPric	21.17	DCEase	6	FtLgCom	+0.5
NumHerd	204	SSB	4	RumpAng	+0.1
NumDaut	0	DSB	6	ThurlWi	0
SampCod					
ProofDa		DPR	+1.4	DMS	
		SCR	+0.6	aAa	

Is it possible to rank heifers based solely on genetic information?
Because heifers do not have any production data yet, their genetic potential was based solely on parent averages. Although the sire and dam contribute equally, we know have far more accurate information about the sire. And because we have genomic data on most of the sires, using the data from the sire and maternal grand sire provides a reasonably accurate estimate of the heifer. Of course, submitting a genomic test for a heifer would provide a superior estimate, but there is an economic cost to doing so.

SIRES\9 COD2:PtaMilk FOR LACT=0
You can create and use an item EPtaM instead of COD2 if you wish to save these estimates.

Estimate COD2 for each heifer based on 2/3 of the Sire, and 1/3 of the Maternal Grand Sire PTAMilk.

If the goal is to identify the very best heifers, one would need to genomic test only the upper 20% based on PTAMilk. There is virtually no chance that a best heifer will be missed.

Likewise, if the goal is to identify the bottom heifers to sell or use as recipients, the ranking based on the weighted estimates of the respective sire PTAMilk is sufficient. A genomic test would not be needed to identify an animal you do not intend to breed.

There are many other traits one could use instead of PTAMilk – Fat, Protein, and even composite
SIRES\9 COD2 FOR ...
Will display a list of currently available indexes

SIRES\9 COD2:NM$ FOR ...
Will use a composite index (Net Merit $)

Can I create my own composite index?
The current formula for NM$ have economic assumptions about costs and revenues that might not match the particular situation of the farm.

Each trait has a different unit, and none are in economic terms. For example, PTAMilk is in extra pounds of milk per lactation. To covert extra pounds of milk per lactation to dollars per daughter, the following math is needed.

1. Predicted milk price paid for an extra 100 pounds or milk. We will use $14.
2. Predicted feed cost to produce an extra 100 pounds of milk. We will use $4.
3. Average number of lactations. We will use 2.9.

In this case, our profit is $14-$4 = $10 per extra 100 pounds of milk (maintenance does not matter, we already have the cow). We get this for 2.9 lactations, so that is $29 per 100 extra pounds of milk, or $0.29 per pound with these prices.

Very few farms get paid on pure volume, although it is important to remember that SCC bonuses almost always reward high volume. We can do similar math for pounds of fat and pounds of protein, but this requires estimating prices for feed ingredients, and a patient and understanding nutritionist.

Some of the other traits are even more problematic. Milk, fat, protein can be measured. Certainly they are affected by management, but we are always comparing a cow to her herd mates, so as long as we assume cows are fed based on their needs and not their sires, we have pretty unbiased estimates.

However, there are new traits that we encourage dairies to manipulate, such as DPR (daughter pregnancy rate) and PL (productive life). It is likely that at least some dairy farmers will look at the sire to make decision as to whether to cull or quit breeding. For instance, if a farmer knew this was a daughter of SHOTTLE, he might try breeding her one more time to get a daughter, or keep her a few months longer.

Similarly, daughters from bulls that produce more milk *should* stay in the breeding pool longer, so they will have longer "days-open", not due to genetics of fertility, but instead due to farmer selection bias. Care must be taken when using these manipulated indexes for sire selection.

Productive life is measured in extra months, not pounds. What is the cost (opportunity to replace with a superior animal) of keeping a cow one month longer, and what is the savings (heifer cost / average number of productive months)? Rational people will disagree on how to convert months to dollars.

DPR is the inverse of extra days-open and, as mentioned earlier, might be affected by sire milk yield. Converting inverse days-open to dollars is not trivial. Furthermore, this is highly dependent on the existing herd pregnancy risk. Herds with high pregnancy risks will realize a lower economic return on improving reproduction. Herds with low pregnancy risks should evaluate opportunities to get more cows bred with higher conception… In any case, assigning a dollar value to DPR is problematic.

SIRES\9 COD2:999 FOR ...
Allows you to enter you own estimates for the costs and expenses for each trait (per lactation), and then it will calculate an index for each cow based on these values. This is likely reserved for the very few people that have concerns about the weighting that the USDA used for NM$, and wish to use a formula that more closely matches their own economic conditions.

Improvements to ABSORB

For the people who use Dairy Comp Consultant or FTECH, the whole ABSORB process has been revamped for this update with an all new look and feel. This improvement was needed due to the internal cowfile changes coming in a future version. The old ABSORB was not able to properly handle these changes so it was necessary to rethink the whole ABSORB concept.

The new ABSORB overcomes these issues and allows absorbing any version of cowfile. In order to accomplish this, it uses an intermediate export file which standardizes the records and allows for a more simple and efficient remapping of items and events. For example, as unknown incoming events are remapped, ignored or added, the ABSORB windows shows those events and allows the user to edit those decisions. Incoming unknown items are done in a similar method. This does come at a cost however, ABSORB will be noticeably slower on larger herds. We feel the added capabilities make up for this slower speed.

Inventory Monitoring in Dairy Comp

Although the examination of past inventory probably does not provide much assistance in making future decisions, the lenders seem particularly fascinated by these data, and commonly request this from their customers. Every so often, we find a farm that spends valuable management time transcribing cattle numbers from Dairy Comp to a spreadsheet to send off to a distant office. This is unnecessary.

There are two reports in Dairy Comp that can automate this task:

What was the summary inventory and changes during the past month?

`ECON\IM`

Category Sex/Use	6/ 1/09	NewIn	<==	Left	==>	7/ 1/09	Average
0-1 M. Female	377	155	0	7	174	351	356.6
2-6 M. Female	798	0	174	4	163	805	783.3
7-12 M. Female	815	0	163	2	119	857	836.1
>12 M. TBRD=0	109	0	114	0	68	155	117.5
>12 M. BRED	285	0	73	1	99	258	285.7
Pregnant	962	0	99	3	116	942	950.9
Milking	2939	0	281	173	246	2801	2874.3
Dry	381	0	246	14	159	454	401.1
Total	6666	155	1150	204	1144	6623	6605.5

What was the detailed inventory during the past 30 days?

```
ECON\I1D30
```

WeekDate	Milking	Dry	LACT>0	%M	NewIn	Left	LACT>1	LACT=1	LACT=0	Total	Milk
...											
06/21/09	2867	410	3277	87	0	1	1828	1449	3364	6641	86
06/22/09	2887	405	3292	88	0	0	1839	1453	3367	6659	86
06/23/09	2899	391	3290	88	0	12	1837	1453	3367	6657	85
06/24/09	2847	440	3287	87	0	35	1830	1457	3367	6654	86
06/25/09	2830	434	3264	87	0	7	1806	1458	3369	6633	86
06/26/09	2831	424	3255	87	0	3	1802	1453	3368	6623	86
06/27/09	2838	420	3258	87	0	0	1803	1455	3371	6629	86
06/28/09	2846	414	3260	87	0	1	1802	1458	3372	6632	85
06/29/09	2858	410	3268	87	0	1	1807	1461	3372	6640	85
06/30/09	2868	400	3268	88	0	9	1805	1463	3375	6643	85

Importing External Data into Dairy Comp

A number of issues have arisen from the use of **FILEIN**. Although this has been an extremely powerful tool over the years, we are encountering an increasing number of situations where internal data are being damaged. Because of the widespread adoption of treatment protocols and automated calculation of meat and milk-withhold dates, we have been forced to remove this function. For example, we are sending these data to the Canada (CQM) program, and we need these data to be accurate. In December 2009, **FILEIN** was removed, unless the **\A** is adding new cows. Of course, **\A** now prohibits updating of existing cows.

As a general rule, there are alternative methods for importing much of these data. Other import procedures either already exist or can be created if a request is made.

Specific examples:

Importing suggested matings:	SIRES\M [SIR1 SIR2 [SIR3]][BY EID]
Sort Gate Data:	MILK\W DateItem TimeItem GateItem FOR ...
Activity:	MILK\A ACTLV ACDAY ACTIM
Dam data to Calves:	EVENTS\7SD CFITM DMITM
TruTest Scale import:	EPLOT\F
Importing and updating EIDs:	ALTER, EID manager
Breed association data:	ECON\J or ECON\H
Genetic indexes from ATA or PROVO:	LOAD\A
Genetic indexes from DRMS:	RECEIVE (need items defined)
Blood pregnancy results:	CONNECT\A (need to contact the lab)

Estimating Dry Matter Intake

Dry Matter Intake (DMI) is the amount of feed that a cow eats per day, after removing the presence of moisture.

Actual DMI is estimated by measuring the amount delivered, and subtracting the amount left over, after adjusting both measures for the moisture content.

Expected DMI is a function of primarily body weight (at fresh), days-in-milk (DIM), parity (LACT), current milk yield, and current percent protein. Researchers have developed formulas to predict expected DMI.

If the DMI estimate is consistent, then the difference between the expected DMI and the measured DMI should be a measure of the environmental effects and mixing or delivery errors. Therefore, tracking this deviation (actual-expected) should be a more sensitive measure of feeding errors.

Use **ALTER** to create and estimate the DMI item:
Items, create an item: DMI, type 1, Predicted Dry Matter Intake
Schedule a daily task to estimate the DMI for each cow: **ECON\G DMI**

To see the average DMI by pen, run the command: **SUM DMI BY PEN FOR LACT>0**

Pregnancy Risk in Heifers

Pregnancy risk is a measurement of how quickly eligible animals get pregnant. With adult cows, the voluntary waiting period (VWP) eligibility requirement is usually quite consistent across herds similar and always is based on DIM. In most herds the VWP ranges from 40 to 70 days in adult cows.

For heifers, the age at VWP can be quite variable and often has more than an age requirement. Thus, it might be that eligible animals need to be over a certain age (in days) AND be more than a certain weight and/or height. Age requirements alone might vary from 365 to 450 days old. DC305 defaults the VWP for cows to 50 DIM; for heifers it is 365 days.

To change the VWP when calculating pregnancy risks, a \V switch is used in the BREDSUM command:
\V60 would be used for 60 DIM for cows; \V395 would set the VWP to 13 months for heifers. It is also possible to use a stored date to designate the actual day the heifer went into the breeding pen. This is similar to BLDAT for determining the VWP for bull breedings. Thus, one might make date item called AIDAT, set it to the date a heifer was put into the breeding pen and use it to designate the ending of the VWP. Historically this was done by putting the date item in the command. BREDSUM AIDAT would tell the program to look at this date item as the first allowable date to breed. Recent changes in ALTER – Option 4 (Pens) allows one to designate this date to be set up in the cowfile. When a heifer pen is designated as an AI pen, the program will automatically set this date in the animal's record when she is first moved into a heifer AI pen. Go into the "Advanced" section of this option and click on the button that says "Heifer AI:" and select the stored item to be used.
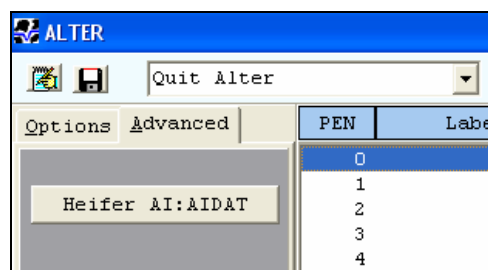
How does this all fit together and what is the significance? The following graph is used to determine the VWP. In this case it is about 400 days.
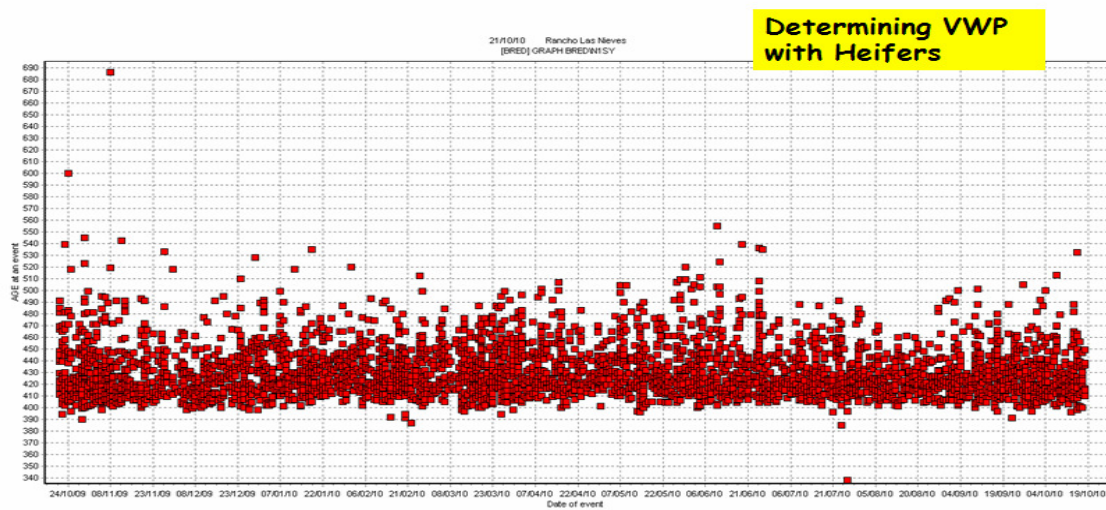
The following 3 pregnancy risk tables were made from the same cowfile from an 8000 head heifer ranch:

21 day pregnancy risk
Wait Period 365

Default VWP

Date	Br Elig	Bred	Pct	Pg Elig	Preg	Pct	Aborts	
10/05/09	1112	405	36	1112	229	21	17	
10/26/09	1079	482	45	1079	267	25	15	
11/16/09	1101	353	32	1101	209	19	15	
12/07/09	1137	378	33	1137	228	20	14	
12/28/09	1142	369	32	1142	228	20	17	
1/18/10	1174	380	32	1174	233	20	9	
2/08/10	1191	404	34	1190	246	21	14	
3/01/10	1166	362	31	1164	228	20	5	
3/22/10	1130	436	39	1126	297	26	10	
4/12/10	1059	331	31	1057	208	20	1	
5/03/10	1035	358	35	1034	222	21	1	
5/24/10	1009	385	38	1008	250	25	0	
6/14/10	973	347	36	973	218	22	0	
7/05/10	1002	354	35	1001	228	23	2	
7/26/10	1004	375	37	1003	232	23	1	
8/16/10	1010	319	32	1002	194	19	0	
9/06/10	1024	372	36	0	0	0	0	???? Preg Stat
9/27/10	1000	429	43	0	0	0	0	???? Preg Stat
Total	17324	6038	35	17303	3717	21	121	

Wait Period 365

21 day pregnancy risk
Wait Period 400

Same VWP for All

Date	Br Elig	Bred	Pct	Pg Elig	Preg	Pct	Aborts	
10/05/09	699	394	56	699	222	32	16	
10/26/09	685	470	69	685	259	38	15	
11/16/09	672	345	51	672	203	30	15	
12/07/09	680	368	54	680	222	33	14	
12/28/09	718	363	51	718	224	31	17	
1/18/10	732	374	51	732	229	31	9	
2/08/10	747	395	53	746	239	32	14	
3/01/10	746	346	46	744	216	29	5	
3/22/10	770	434	56	766	296	39	10	
4/12/10	671	330	49	669	207	31	1	
5/03/10	671	353	53	670	220	33	1	
5/24/10	651	380	58	650	246	38	0	
6/14/10	602	344	57	602	217	36	0	
7/05/10	603	350	58	602	225	37	1	
7/26/10	588	367	62	587	227	39	1	
8/16/10	615	313	51	607	192	32	0	
9/06/10	620	365	59	0	0	0	0	???? Preg Stat
9/27/10	612	422	69	0	0	0	0	???? Preg Stat
Total	10850	5926	55	10829	3644	34	119	

Wait Period 400

21 day pregnancy risk
Wait Period AIDAT

Using AIDAT Item

ds AIDAT	Br Elig	Bred	Pct	Pg Elig	Preg	Pct	Aborts	
10/05/09	553	384	69	553	213	39	15	
10/26/09	601	476	79	601	262	44	14	
11/16/09	437	335	77	437	196	45	14	
12/07/09	465	359	77	465	214	46	13	
12/28/09	460	351	76	460	219	48	17	
1/18/10	482	364	76	482	224	46	9	
2/08/10	512	393	77	511	238	47	14	
3/01/10	500	341	68	498	215	43	5	
3/22/10	536	423	79	532	286	54	10	
4/12/10	365	309	85	363	196	54	1	
5/03/10	447	339	76	447	213	48	1	
5/24/10	470	373	79	469	243	52	0	
6/14/10	425	337	79	425	214	50	0	
7/05/10	455	341	75	454	218	48	2	
7/26/10	461	362	79	460	224	49	2	
8/16/10	434	305	70	426	187	44	0	
9/06/10	486	363	75	0	0	0	0	???? Preg Stat
9/27/10	509	421	83	0	0	0	0	???? Preg Stat
Total	7603	5792	76	7583	3562	47	117	

Wait Period AIDAT

There are three different questions related to pregnancy risk in heifers:

1. What is the pregnancy risk of the herd using a standardized VWP of 365 days of age?
2. What is the pregnancy risk of the herd using a customized defined VWP?
3. What is the pregnancy risk of the herd once the decision to begin breeding has been made?

It is obvious that the default pregnancy risk does not accurately measure the reproduction performance of the heifer ranch. However, both setting the VWP to 400 days and using the actual date the animals were moved into the breeding pens have a place in looking at the management of the heifer ranch. The most accurate measurement of strict reproduction activity is using the AIDAT. This certainly should be what is used to monitor reproduction whenever it is possible to accurately capture the date that the heifer was moved into the AI pen.

However, if the intention is to start breeding animals at 400 days of age, using the V400 switch will show how the reproduction is doing compared to (or in association with) the global intentions of the heifer ranch. This would indicate what effect feeding, housing and diseases have on the growing and breeding of the animals.

The other important thing to understand is one must know how the heifers are handled once they are put into the breeding pens. This works well if they are put into the breeding pens when they are ready to breed as defined as "when an animal comes into heat, she will be bred." However, sometimes animals are moved into "breeding" pens and then need to reach a certain height (often as measured by a mark on the stanchions) before being bred. If this is the method used, AIDAT is not as good an indicator of breeding efficiency as it would be if the heifers came into the breeding pen truly ready to breed.

Monitoring the Use and Performance of Sexed Semen

A number of dairy farms have been trying sexed semen and they naturally have questions about:

What percent of my heifer breedings have been to sexed semen?
BREDSUM\M \Y

What has been the fertility of sexed semen compared to conventional semen?
BREDSUM\M \Y
BREDSUM\XBM \Y

What has been the female ratio from sexed semen?
EVENTS\3 FOR LACT=1 PSIRC>511H (or PSIRC>529H...)
or whatever the sexed semen code is ... vs.
EVENTS\3 FOR LACT=1 PSIRC<511H

Rapid Monitoring of Recent Reproduction

The economic value of good reproduction continues very most important in dairy farming profitability, although high beef prices and inexpensive heifers have temporarily decreased it a little. Over the years, many parameters and tools have been developed to help assess the status of reproduction, either to detect a recent issue, or to monitor the impact of a recent change. Thirty years ago, (prior to on-farm computers), people used metrics such as calving interval, average days-open, percent-of-herd pregnant, average day-in-milk, average times-bred, etc. Of course, these were important goals, but they do not change fast enough to be useful for modern farms. For example, if two parameters or metrics tell us the same information, the one that reacts more quickly to a recent change will be favored.

In the mid 1980's, we were involved with a prospective trial regarding infusing post-partum cows with antibiotics. In order to help show the impact of that work, we developed a new tool called pregnancy rate, later renamed to the more technically correct Pregnancy Risk, which was added to BREDSUM. The question was simple: "Has the ability of this farm to get open cows pregnant changed in the recent past?"

And actually, the estimate (calculation) is simple: How many open cows were we trying to get pregnant, and how many became pregnant in a 21-day window.

It took many years for the industry to accept this approach to monitoring farm reproduction, but it is certainly rewarding to see the high level of adoption of this approach, not only in the US, but around the world.

However, like all tools, two facts are true:
1. No one tool is correct to solve all problems.
2. Tools can be misused.

One of the issues with monitoring reproduction is called lag. Lag is the time it takes from when an event occurred until it can be measured by the metric. Because our goal is pregnancies, we are forced to wait until we have a diagnosis of pregnancy to see if we can count that breeding as a success, or as a failure.

Traditionally, cows were diagnosed by rectal palpation somewhere between 35 and 42 days after breeding. Of course, if aggressive heat detection is done, many of the failures will be detected by 21 days, but successes will not be counted until later. When we are estimating success by counting pregnancies, we will make an error is we count failures before we count successes.

But it turns out there are potentially useful information in those 21-day re-breds.

Recently, we had a large dairy have a serious issue with their semen tank, such that no semen was viable. Of course, cows were still being inseminated, but no cows were getting pregnant. Everyone will agree this is an emergency, though there might be discussion as the exact level of economic loss. In a situation like this, the sooner we can be alerted to an issue, the better.

The number of re-breds that occur each week is a function of:
1. Number of breedings in the past
2. Apparent conception to those breedings
3. Heat detection this week
4. Random variation affecting the above factors.

For example, if three weeks ago, 100 cows were inseminated and 60% of the cows are still pregnant three weeks later, then 40 should be open. If the farm catches 50% of the heats, then there should be about 20 cows re-bred that week, or 20%. [Note that the apparent conception rate is much higher at three weeks (21 days) than at six weeks (42 days), as there is significant pregnancy (early embryonic) loss prior to 35 days.]

If we typically find 20% of breedings as re-breds, there is no evidence of a change. However, on the farm with the bad semen tank, this 20% abruptly changed to 50%. This change should alert us to further investigate if either heat detection became extremely good, or conception became quite bad, or it was just random chance, like having 5 bull calves in a row.

We recommend running using BREDSUM\R to monitor Recent conception. Following this unfortunate incident, we added a new alert if the percentage of re-breds changes significantly. That week will be red instead of the usual green. Red does not mean there is proof of a problem, but it should be an alert that further investigation is warranted. We would rather have an occasional incorrect red warning than miss a broken semen tank for three extra weeks.

Occasionally, the bars will be yellow. This is a far less severe warning. It just means there a number of cows that do not have a definitive pregnancy diagnosis yet – either they were skipped at preg check, or they left the farm before a diagnosis was made.
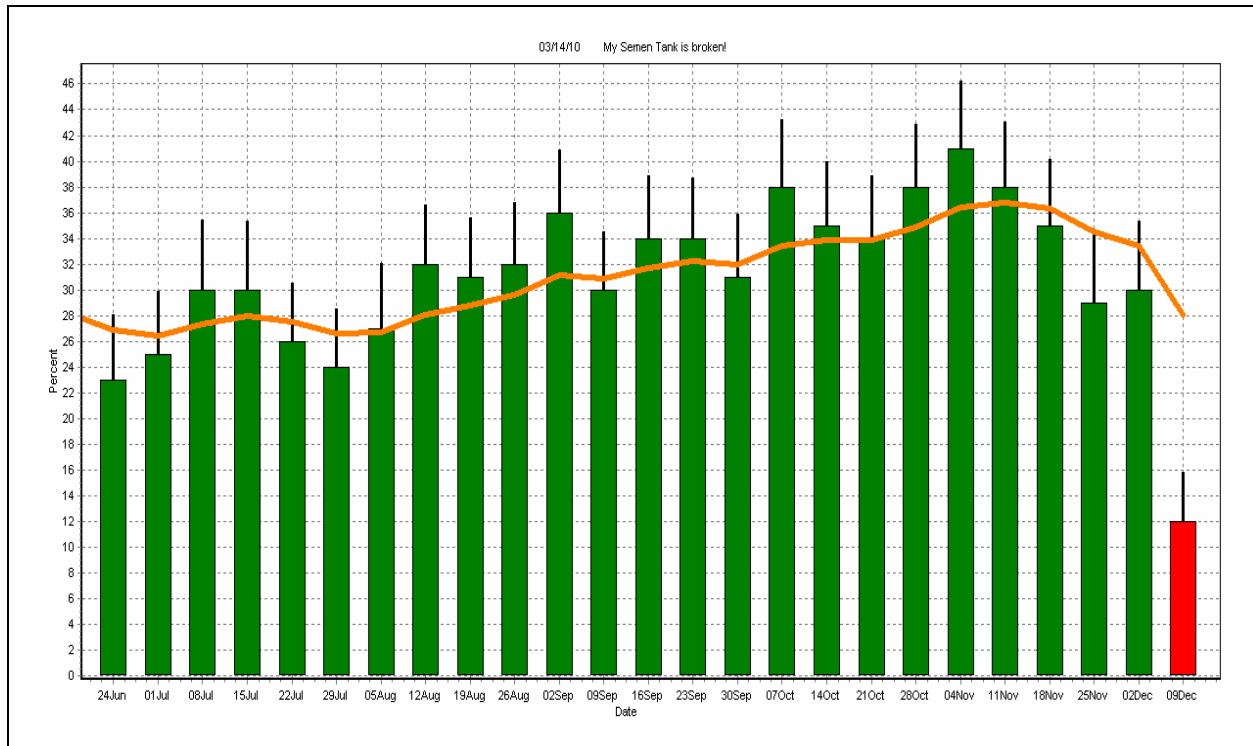
Manipulation of the Voluntary Waiting Period

For many years, everyone "knew" that the appropriate time to start breeding cows was 50 days post partum. Breeding cows much before that commonly resulted in dramatically lower conception; waiting longer extended the average days-in-milk (and thus lowered herd milk yield), and also put cows at increased risk of being replaced because they were still open and not producing sufficient milk to keep their position in the herd.

However, with the wide adoption of synchronization, some have suggested that too many cows are getting pregnant too early. This means the percent of the time they are dry is increased. In addition, some herds need the extra time to provide enough feed to regain the lost weight following freshening. And there are some situations where the transition program is so bad that cows are not yet healthy by the time breeding was starting.

Many people will use the V switch when looking at pregnancy risk to adjust the voluntary waiting period (VWP) to whatever they use on their dairy. This is common for those who start breeding before 50 days and does very accurately measure their reproductive efficiency. Going the other direction also accurately measures their reproductive efficiency but as the days extend beyond 50 days, they increasingly start to differ from the 50 day industry standard.

Recently this became apparent with some dairies that decided to use extended VWPs to 70 or more days in milk, thus skipping the first "normal" cycle. They then measured their Pregnancy Risks using a V switch such as BREDSUM\EV75. They also didn't start breeding until 75 days in milk. If the breeding was going well, as shown by the Pregnancy Risk numbers, they expected the resulting calvings to be almost equal to a herd that starts breeding at 50 DIM. This is a mistake. Comparing such a dairy with an industry standard (or their neighbor with a different VWP) is not comparing "apples-to-apples". There can be a pregnancy risk difference of 4 or more percent between herds using extended VWPs vs. using a VWP of 50 days. Thus, if one has an 18 pregnancy risk with extended VWP, it is equivalent to a 14% (or less) pregnancy risk when using a VWP of 50. Also the higher the extended VWP is, the greater the difference between the two calculations. Thus, while looking strictly at reproductive activity using the true VWP will help measure it, not using an "industry standard" can lull one into thinking their breeding is going well,

therefore fresh cows should be coming regularly, when, in fact, this is not true. If one thinks of reproductive efficiency as only efficient breeding activity, that misses the main point of the whole process. Never forget, breeding is done to get cows to freshen in a timely manner. Anything that forgets that when monitoring reproduction can lead to major problems in managing a dairy.

For those with a VWP of less than 50 DIM, we encourage the use of the V switch with BREDSUM\E to monitor their reproductive performance. For those who wait beyond 50 to start breeding if the \V switch is used to monitor reproduction of the extended VWP, they should also use run the program without the \V to measure their Pregnancy Risk against the "industry standard" when thinking of reproduction in the fullest context of its activity.

2010 FeedWatch Update

The 2010 FeedWatch update is available. This year's update signals a significant change in the design and functionality of the FeedWatch system. We believe that we have accomplished the goal of simplifying the system to more efficiently manage the feeding process while reducing the need for human intervention.

Some update features:
    Screen customization for each user
    Simplified setup: Attach one or more recipes to a pen and be ready to feed
    Simplified changes: All ration changes done solely through recipes
    Scheduling of mixes and loads can automated
    New report writer will allow more options and flexibility
    The scale software has been greatly simplified and streamlined
    Each mixer's capacity is used for mix or load building
    A new touch screen scale will be available from Avery Weigh-Tronix

For those of you who have not yet updated and are interested in doing so contact our support staff for assistance.

Updating process:
    We convert your current FeedWatch information to the new version
    Install the new update on your PC for training purpose ONLY
    You continue feeding with your old version while you learn the new system
    When you are comfortable with the new version, we will work with you to update the scale and move you to the new system.

Using EGRAPH to Estimate 95% Confidence Intervals for Event Incidence

While EGRAPH has been extensively used in reproductive analysis, it also can be used in the examination of other events such as disease incidence. Since many diseases in adult cattle occur within the first month of calving, EGRAPH offers options to examine incidence over time, typically by month of freshening.

```
   FDAT Total    FRESH       DA   95% CI
======== ===== ======== ======== =======
   Oct08   153      144        9    3-11
   Nov08   148      144        4    1- 7
   Dec08   123      122        1    0- 4
   Jan09   138      134        4    1- 7
   Feb09   156      150        6    2- 8
   Mar09   171      164        7    2- 9
   Apr09   184      177        7    2- 8
   May09   186      183        3    1- 5
   Jun09   163      162        1    0- 3
   Jul09   176      173        3    1- 5
   Aug09   171      170        1    0- 3
   Sep09   153      148        5    1- 8
======== ===== ======== ======== =======
Total     1922     1871       51    2- 3
```

Care must be taken when looking at event (disease) incidences. There is always uncertainty around estimates of incidences. Hence, DC305 expresses risks as 95% Confidence Intervals (CI) rather than simple percentages.

The examples below illustrate the trends for DA incidence by month of freshening.

EGRAPH FRESH DA FOR DIM<31 FDAT>13MON FDAT<01MON \D430 \FN1C

Details of Command Mechanics for Disease EGRAPHs
The command used to generate the above example was (run GUIDE first to load needed items):
EGRAPH FRESH DA FOR DIM<31 FDAT>13MON FDAT<01MON \D430 \FN1C

FOR statement
DIM<31   Limits the report to events that occurred in the first 30 days-in-milk. This assumes the "period-at-risk" to be the first 30 DIM. Some diseases may have shorter or longer period-at-risks.

FDAT>13MON   Limits the report to events that occurred in the last 13 completed months
                   This condition ensures the first month included reflects a complete month.

FDAT<01MON   Limits the report to events that occurred prior to the last completed month
This condition ensures that all animals in the final included month are past the period-at-risk – in this case 30 DIM.

In the example shown above the date in the cowfile was 11/10/09.
Cows fresh in Nov 2009 were not past the 30 DIM at risk, so were excluded
Cows fresh in Oct 2009 were not all past the 30 DIM at risk, so were excluded