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1. **NYBPA ALL BREED SALE – APRIL 25, 2014**

The New York Beef Producer’s will once again be holding the spring All Breed Sale at the Empire Farm Days site in Waterloo. As of this writing there are 12 heifers, 12 bulls and 1 embryo package. For more information go to NYBPA.org or contact Robert Groom at Phone: 315-573-2569 or Email rmlgroom@hotmail.com.

2. **HOLD THE DATE – WEST VIRGINIA BEEF TOUR**

On September 23-28, 2014 beef producers will have the opportunity to tour Wild and Wonderful West Virginia. The focus of the tour will be feeder cattle marketing. This state has a very long history of marketing feeder cattle from basic auction, graded, commingled video, and board sales. Their preconditioned BQA sale is renowned for producing some of the highest feeder calf prices in the east. Participants will have the opportunity to attend one of these premier sale events. For veteran beef tourists, you will recall that our first beef tour was to WV in 1993. There are a lot more details to come. Mark your calendars now and stay in touch.

3. **INFORMATION ON ESTROUS SYNCHRONIZATION AND AI - RECOUP $62/COW**

Materials developed for Northern New York Beef Week on synchronization and AI, have been posted to the Cornell Beef Management website. [http://beefcattle.ansci.cornell.edu/eventsprograms/](http://beefcattle.ansci.cornell.edu/eventsprograms/).

Topics include:
- Estrous Synchronization and AI to improve profitability
- Reproductive Task Force website
- Estrous Synchronization Protocols from the Reproductive Task Force
- Tips for a successful Synchronization Program
- Natural Service vs Artificial Insemination
- Spreadsheet for determining the cost of Estrous Synchronization

According to my calculations, synchronization and AI can add $62/cow to net return. With current estrous synchronization protocols, when followed religiously and cows are in BCS above 5.5, one time conception rate to AI can be 65%, with total conception at 95% using a cleanup bull. For more information contact your local cooperative extension office or AI company.

4. **PASTURE CAN DECREASE HEIFER CONCEPTION RATE**

Results of research reported at the Range Cow Symposium shed new light on the importance of post AI nutrition on conception rate in heifers. Heifers were divided into three maintenance energy groups: 1) GAIN – fed at 125% of NRC), 2) MAINTAIN – fed at 100% of NRC and 3) LOSE – 80% NRC. Heifers remained on these diets for 21 days following AI. Heifers that returned to estrus during the 21-day dietary treatment were inseminated and following the conclusion of the dietary treatment all
heifers were comingled and placed with fertile bulls. Pregnancy diagnosis was conducted at 30 days post-AI to determine pregnancy success following the initial AI and 30 days after the breeding season to determine 2nd service AI pregnancy rates and overall breeding season pregnancy rates. Analyses revealed that heifers that were fed to continue their pre-breeding plane of nutrition (GAIN treatment) for 21 days post-AI had greater AI pregnancy rates compared to both groups of heifers that had a decrease in dietary plane of nutrition (MAINTAIN and LOSE heifers). In addition, heifers in the MAINTAIN and LOSE treatments had decreased 2nd service AI pregnancy rates and decreased (P < 0.05) overall breeding season pregnancy rates. The GAIN group had an overall conception approximately 23% greater than either the MAINTAIN or GAIN group.

This becomes important if heifers were raised in a drylot condition and then put on pasture after breeding. This abrupt change in diet can have significant impact on average daily gain. The bottom line is that heifers should be maintained on the same plane of nutrition post AI breeding as they were prior to breeding. This may require energy supplementation on pasture for at least 21 days following AI. To read the entire article go to Nutritional Management Post-AI to Enhance Pregnancy Outcomes...

5. “BEEF UP YOUR BOTTOM LINE” CORNELL BEEF FARM BUSINESS SUMMARY

Cornell Cooperative Extension will be offering a new educational opportunity for beef operations in 2014, and is looking for producers to participate beginning in January.

As the number and size of beef operations grow across New York State, tools are needed for beef producers to better understand their farm’s profitability and financial position. Mike Baker, Beef Cattle Extension Specialist of Cornell University, and more than a dozen CCE offices are working together to make FINPACK, a respected farm business analytical tool, available across the state. Further, the data that is generated from the project can be confidentially aggregated for New York State to create benchmarks for the industry. Our livestock operations are very different from other parts of the country, so benchmarks for our specific region are important.

BENEFITS OF PARTICIPATING:

- **VALUABLE FINANCIAL DOCUMENTS**
  - FINPACK will prepare financial statements and documents, including: Balance Sheets Cash Flow Statements; Income Statements; and Budgets

- **BENCHMARKS**
  - Compare your farm to other similar operations in New York State

- **IMPROVE YOUR RECORDS**
  - Keep better financial records

- **TRACK YOUR PROGRESS OVER TIME**
  - Compare your production and financial results from year to year
For information on how to participate contact your local Cornell Cooperative Extension office (http://ansci.cornell.edu/wp/beefcattle/field-staff/) or Mike Baker, Beef Extension Specialist, 607-255-5923, mjb28@cornell.edu.

6. New York All Forage Bull Test – 55 day report

Due to the storm, weights (Wt) and Body Condition Scores (BCS) were taken March 11, 2014. This marked 55 days, which is halfway through the NY All Forage Fed Bull Test. The test began January 15 with 16 bulls from 10 farms. Average daily gain since February 12 was 2.4 lbs, cumulative gain since the start of the test was 2.3 lbs. Gain continues to exceed software modeling predictions. The bulls have remained healthy.

The test will run for 112 days with the end date May 7. Next data collection is April 9.

Note the change in BCS. Bulls were scored by different individuals. All bulls are gaining; none of the bulls have actually lost BCS, this is just the difference in the way scoring is done.

<table>
<thead>
<tr>
<th>Pen 14 Ave.</th>
<th>Pen 15 Ave.</th>
</tr>
</thead>
<tbody>
<tr>
<td>775</td>
<td>801</td>
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### 2014 NY All Forage Fed Bull Test, March 11, 2014

<table>
<thead>
<tr>
<th>CUID</th>
<th>Farm ID</th>
<th>Name</th>
<th>Breed</th>
<th>DOB</th>
<th>Wt</th>
<th>ADG¹</th>
<th>BCS²</th>
<th>change in BCS³</th>
<th>cum ADG ⁴</th>
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</thead>
<tbody>
<tr>
<td>1401</td>
<td>2</td>
<td>Lucenti</td>
<td>Ch</td>
<td>4/5/2013</td>
<td>936</td>
<td>1.6</td>
<td>5.5</td>
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<td>2.0</td>
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<tr>
<td>1403</td>
<td>313</td>
<td>Kraszewski</td>
<td>GV</td>
<td>2/6/2013</td>
<td>1090</td>
<td>1.5</td>
<td>6.0</td>
<td>0.0</td>
<td>1.5</td>
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<tr>
<td>1405</td>
<td></td>
<td>Moonlight</td>
<td>Saner</td>
<td>5/3/2013</td>
<td>766</td>
<td>1.5</td>
<td>6.0</td>
<td>0.5</td>
<td>2.2</td>
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<tr>
<td>1406</td>
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<td>Red Dog</td>
<td>Saner</td>
<td>5/6/2013</td>
<td>676</td>
<td>0.5</td>
<td>5.0</td>
<td>-1.0</td>
<td>1.1</td>
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<tr>
<td>1407</td>
<td></td>
<td>YC</td>
<td>Coombe</td>
<td>4/14/2013</td>
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<td>5.0</td>
<td>-1.0</td>
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<td></td>
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<td>40</td>
<td>Hartman</td>
<td>AR</td>
<td>3/30/2013</td>
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<td>2.3</td>
<td>6.0</td>
<td>0.0</td>
<td>2.6</td>
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<tr>
<td>1415</td>
<td>Z30</td>
<td>Engh</td>
<td>DV</td>
<td>12/17/2012</td>
<td>678</td>
<td>2.7</td>
<td>5.0</td>
<td>-1.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

### Notes

1Average Daily Gain; ²Body Condition Score; ³Change in Body Condition Score from 12-Feb; ⁴cumulative gain since 15-Jan.

Note the change in BCS. Bulls were scored by different individuals. All bulls are gaining; none of the bulls have actually lost BCS, this is just the difference in the way scoring is done.
Feed Intake was calculated for each pen. Both groups’ feed is supplemented with Kent Feeds minerals donated by Sammi Clark, Kent Feeds sales rep. Pen 14 is being fed triticale silage plus calcium carbonate added to meet calcium requirements. On an as fed basis, bulls consumed 46.7 lb/head/day, 13.7 lb/head/day on a dry matter basis. They consumed 1.8% of the pen’s average body weight on a dry matter basis. Pen 15 bulls are being fed alfalfa silage and consumed 50.1 lb/head/day as fed, 15.1 lb/head/day on a dry matter basis. They consumed 1.9% of the pen’s average body weight on a dry matter basis.

Feed calculations, 27 days ending February 11, 2014.

<table>
<thead>
<tr>
<th></th>
<th>Pen 14</th>
<th>Pen 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFI¹</td>
<td>46.7</td>
<td>50.1</td>
</tr>
<tr>
<td>DMI²</td>
<td>13.7</td>
<td>15.1</td>
</tr>
<tr>
<td>Avg wt, lb</td>
<td>775</td>
<td>801</td>
</tr>
<tr>
<td>AFI¹</td>
<td>6.0%</td>
<td>6.3%</td>
</tr>
<tr>
<td>DMI²</td>
<td>1.8%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

¹Dry Matter Intake; ²As Fed Intake

For more information, contact Nancy Glazier, NWNY Small Farms/Livestock Specialist, 585-315-7746, nig3@cornell.edu or Mike Baker, Beef Extension Specialist, 607-255-5923, mjb28@cornell.edu.

7. PRICES FOR NEW YORK FEEDER CATTLE – PRODUCERS MUST DO THEIR PART

Research is being conducted on the factors that affect the price of feeder cattle in New York. The purpose of the research is to identify where we are and to areas where New York beef producers need to focus to improve the price received for their cattle. The data is being collected at Finger Lakes Livestock Exchange in Canandaigua, which based on the 14,000 feeder calves marked in 2013 represents the value that buyers and sellers alike place on their expertise in marketing feeder cattle. A recent article was published with data that while correct, was not placed in its full context and did not paint a favorable picture. The purpose of this article is to better explain why prices vary and what producers can do to increase the value of their calves.

The analysis of this data has provided results similar to studies conducted in Arkansas, Kansas and Missouri. There are discounts for bulls, horned, small framed and light muscled cattle. Additionally black hided cattle bring a premium to all other colors. However two results have been reported and without the context in which they occur seem troubling. Compared to Cattle Fax data the prices received in New York are in direct relation. That is our prices follow the national trend. Yet, the average difference in price is $0.28/lb. There are sound reasons for much of this difference. First is freight. Many of these cattle go to the major feeding areas in the Midwest. At $0.04/loaded mile and 1500 miles to Kansas, the cost would be $6000. With 50,000 lbs on the truck this equals $0.12/lb. The differential
is now down to $0.16/lb. The second factor is that the prices reported in Cattle Fax often represent the higher end of their sales, which accounts for another $0.06 - $0.08/lb. Therefore the true difference is around $0.08 - $0.10/lb.

The question now becomes how we capture that difference. Analysis of the data shows that 6-7% of the cattle in the Fall 2013 sales brought $1.87/lb. matching Cattle Fax data. The difference in these cattle is that they were uniform in weight, muscle and frame size, were preconditioned properly, were of known genetics and had a reputation with the buyers. These cattle not only captured the true $0.10/lb. difference but their quality and reputation covered the freight and Cattle Fax discount. New York has cattle that can compete on the national scale.

Another fact that has been reported, but not fully explained is that on average preconditioned cattle only bring a $0.028/lb. premium. On a 550 lb. calf this is worth $15 which is about the breakeven cost for the vaccines and dewormer. Admittedly this is not much of an incentive. The sale barn does their part by telling the buyers what the cattle had received relative to vaccinations. When a group of cattle come into the ring and it is announced that they received a killed vaccine the day before the sale, these cattle are not preconditioned. Vaccines take 3-4 weeks to deliver full immunity. Cattle receiving a killed vaccine must be vaccinated twice 3-4 weeks apart to achieve full immunity. Therefore the first killed vaccine must be given 6-8 weeks and the second 3-4 weeks prior to the sale.

Using a modified live vaccine (MLV) the day before the sale also is an issue. A MLV, while not requiring a booster can cause disease. Cattle going through the market are stressed and given a MLV just prior to the stress event can actually be worse than administering no vaccine at all.

Buyers know what works and cattle that are not preconditioned properly will not receive the premium compared to properly preconditioned cattle.

A second factor affecting the value of pre-conditioned cattle this year is simply supply. Again, the sale barn’s commitment to doing their part is demonstrated in that they sell all pre-conditioned cattle first. However if a buyer has an order that doesn’t get filled with preconditioned cattle, he is forced to buy non-preconditioned cattle for more than he would like. As the supply of feeder cattle begins to build, this relationship will change.

The take away message for beef producers is that quality sells:
- Uniform lots require a calving season less than 60 days.
- Castrate bulls
- Black hided cattle bring a $0.12/lb. premium
- Select bulls that sire heavy muscled, moderate to large frame calves.
- If using a killed product, the first vaccine should be given 2 months before the sale and followed by the second vaccine 3-4 weeks later.
- Work with a reputable bull supplier that will help you market the calves.

Taking these steps can move you into the top 6-7% of the cattle that bring national prices. If more of these cattle came through the sale barn, the manager has a lot more to work with. After all, the auction
manager can only sell what is delivered to the barn. It is up to the producer to do their part so the auction manager can use his expertise to get you the highest price.

For more information on this research contact Mike Baker, 607-255-5923, mjb28@cornell.edu.

(Appreciation is expressed to Ron and Barb Parker at Finger Lakes Livestock Exchange for allowing us to conduct this research at their facility.)

8. OUT – WINTERING BEEF COWS

(Editor’s note, this article first appeared in Farming Magazine, http://www.farmingmagazine.com/, and while the worst of winter is behind us, keep this handy for next winter!).

The last two months have been unseasonably cold and snowy. During these harsh conditions, questions are raised about whether beef cattle should be housed in a barn. This is a logical question given that the predominant form of animal agriculture in our area is dairy and most dairy cows are housed in doors. However the beef cow is endowed with unique characteristics that allow her to deal with and adapt to challenging weather conditions. Beef cows are housed outdoors because it is healthier and reduces the cost of labor and bedding.

First, a little review of Biology 101 of the bovine. All mammals maintain a constant body temperature; a condition known as thermoneutrality. Thermoneutrality is achieved through the production and release of heat. The production of heat is a function of tissue metabolism but, more importantly in cattle it is a function of the fermentation of forage in the rumen. In fact the production of heat is determined primarily by feed intake, i.e., the more she eats the more heat she produces.

Energy is required for maintenance of bodily functions such as achieving thermoneutrality. There are several factors that affect the maintenance requirement in cattle. Most germane to this discussion is that dairy cattle require 20% more energy to maintain thermoneutrality and other tissue functions than beef breeds. Dairy cows require more energy to stay warm because they have less insulation, thinner hide and less hair, along with the energy cost associated with producing large volumes of milk.

A final concept to understand is the upper and lower critical temperature. This is the temperature at which the maintenance requirement changes due to environmental conditions. The beef cow is most comfortable when the air temperature is between 30° F and 80° F and is considered the lower and upper critical temperature. However certain environmental conditions can alter these values.

Wind speed. Depending on the velocity, the maintenance requirement of cows with no wind protection increases 15%-30%.

Coat condition. Hair is the primary external source of insulation. If the hair coat is wet or matted, its ability to insulate is greatly reduced, which increases the lower critical temperature. For example a dry heavy winter coat provides adequate insulation down to 18° F, but if the hair coat is wet and matted, at 59° F cattle need additional energy to meet maintenance requirements. As a general rule the energy requirement of wet cattle increases 2% for every degree under 59° F.

Therefore cold stress could be defined as the point where temperature, wind speed and coat condition causes the cow to drop below her lower critical temperature.

Fortunately the combination of cattle biology and behavior along with management intervention can minimize the impact of cold stress.

Cattle acclimatization. This is the adaptive changes in response to changes in the climatic conditions and includes behavioral as well as physiological changes. Behavioral changes in response to
Cold stress include finding natural or man-made windbreaks, huddling in groups, or changing posture to minimize heat loss. Physiological adaptations include changes in metabolism, respiration rate, distribution of blood flow, feed and water consumption, rate of passage of feed through the digestive tract, hair coat, and body composition. As stated previously there is also a genetic component to combatting cold stress. Dairy cattle suffer more than beef. Hereford cattle are more cold tolerant than many other beef breeds.

**Nutrition.** As a general rule, for every degree that the effective temperature is below the lower critical temperature, the cow’s energy needs increase by 1 percent. For example, a 1400 lb. dry brood cow in good condition with a dry hair coat will consume about 35 lb. of dry hay per day. Table 1 below shows the increased hay required if this cow is to maintain her body condition under different temperatures and wind speed. With no wind, when the temperature drops from 30°C F to 0°F, she will need to eat 46 lbs. of dry hay to maintain her weight. In response to cold, changes in behavior and physiology will cause her appetite to increase and therefore eat more feed; perhaps up to as much as 30% more. For cows with 24 hour access to good quality hay, they will adjust their intakes to reflect climatic conditions. For those on a restricted intake and/or poor quality hay, adjustments in quantity and quality will need to be made to accommodate the lower critical temperature.

<table>
<thead>
<tr>
<th>Wind speed, mph</th>
<th>Temperature, °F</th>
<th>0</th>
<th>15</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dry hay²,³, lbs./hd./d</td>
<td>46</td>
<td>40</td>
<td>35</td>
</tr>
<tr>
<td>0</td>
<td>47</td>
<td>42</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>48</td>
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<td>41</td>
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<td>20</td>
<td>53</td>
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<td></td>
</tr>
<tr>
<td>30</td>
<td>58</td>
<td>53</td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

¹1400 lb. dry cow, good body condition, consuming 2.5% body weight in dry hay.
²89% DM, 52% TDN.
³Values in red indicate that higher energy feeds will need to be fed.

Reality is though that a cow can only increase her intake by no more than 30%, therefore higher quality hay or energy supplements such as corn silage, corn grain or distiller’s grain will need to be provided to meet nutrient requirements. In Table 1, these values are shown in red. Recall that if she has a wet matted hair coat, her energy requirement increases by as much as 40%.

**Protein.** Protein requirements will not increase due to cold stress. However, by feeding additional hay to meet energy requirements, protein intake will naturally increase.

**Water.** Water consumption decreases during cold weather. Limiting water intake due to frozen waterers, creeks or ponds will decrease feed intake. Also following a cold stress event, water intake may increase 50% - 100%.

Summary.
Beef cattle are able to withstand cold stress because:
- Rumen fermentation of forage produces body heat
- There is increased insulation provided by body fat, thick skin and heavy hair coat – think about the snow that accumulates on her back
- Large body size to hold heat
- Cattle naturally seek natural windbreaks and shelter
- Cattle will stand and huddle which conserves heat

It is essential though that a good manager implements practices that augment a beef cow’s ability to withstand cold weather:

- Monitor the weather. Cows can withstand one or two days below the lower critical temperature, but for longer periods, changes in nutrition and management need to be implemented.
- Protect animals from the wind. Wind breaks can be natural or man-made.
- Bed cows well. Place old hay bales, corn stalks and other sources of bedding in natural wind break areas.
- Provide additional feed, which may include grain. If wet feeds are fed, make sure they are not frozen.
- Provide ample fresh clean water.

So, do beef cows need to be housed in a barn? When properly managed and fed, beef cows do not need a barn to combat the effects of exceptionally cold winters.

9. TO/DO APRIL/MAY
A. Calving season is here or fast approaching. Do you have the following items:
   1. Frozen colostrum
   2. Calf pulling equipment.
   3. Stomach tube, thermometer, dry towels.
   4. Ear tags, navel dip (7% iodine).
   6. Castration and dehorning equipment.
   7. Therapy for scours and respiratory problems.
   8. VETERINARIAN’S PHONE NUMBER.
B. Practice good calving management:
   1. Provide clean dry area for calving. Clean, frozen or snow covered pasture protected from the wind works well.
   2. If calving in a barn, keep area well cleaned and bedded. Barns, while comfortable for the manager, are a great place to harbor disease organisms that increase throughout the calving season.
   3. Make sure calf consumes 1.5-2.0% of its body weight (1-2 quarts) of colostrum within 4-6 hours.
   4. Be prepared to provide fluids to scouring calves that become dehydrated. Consult veterinarian for advice.
C. Plan spring fertilizer needs. Mid to late April is an excellent time to apply nitrogen to grass. Consult Field Crop agent at your local Extension office.
D. Prepare for pasture season. How will you control flies this year: tags, pour-ons, back rubbers? It is not recommended to use insecticides furnished in feed or minerals.

E. Get ready for breeding season;
   ➢ If you use A.I. order semen and check your equipment. Be sure breeding corral is in working order
   ➢ If breeding naturally, make sure you have enough bulls: 10-15 cows per yearling bull; 20-25 cows per 2-year old bull; 30-35 cows per mature bull.
   ➢ Have phosphorous source in form of free-choice mineral mix; phosphorous is important for maximum fertility.
   ➢ Yearling British heifers should weigh a minimum of 700 lbs. and continental heifers a minimum of 750 lbs. before being bred.
   ➢ If lactating cows are thin and not cycling, feed more energy.
   ➢ Consult your veterinarian for a vaccination program that meets your needs. At a minimum consider vaccinating for IBR, BVD, BRSV, PI3 and Leptospirosis.