

# COW/CALF CORNER

The Newsletter

From the Oklahoma Cooperative Extension Service

**April 20, 2020**

**In this issue:**

## **USDA offers help for the cattle industry**

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

## **Keeping the value of the vaccine dollars**

**Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist**

## **USDA offers help for the cattle industry**

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

Last week, USDA announced a total of \$19 billion for the Coronavirus Food Assistance Program (CFAP). The program includes \$16 billion in direct payments to farmers and ranchers including \$9.5 billion of emergency funding from the CARES Act and \$6.5 billion of funding from the Commodity Credit Corporation (CCC). Additionally, CFAP includes \$3 billion in purchases of meat, dairy and produce to support producers and provide food assistance to those in need. CFAP is funded from the Coronavirus Aid, Relief and Economic Security Act (CARES), the Families First Coronavirus Response Act (FFCRA) and other USDA programs.

The beef cattle industry will receive \$5.1 billion of CFAP funding to partially offset 2020 losses due to COVID-19. Cattle producers will receive a single direct payment determined by two calculations including 85 percent of price losses from January 1- April 15, 2020 and 30 percent of expected losses for two quarters after April 15. In order to qualify, commodities must have experienced at least a five percent price decrease between January and April. USDA expects to begin sign-up in early May and distribute payments by late May or early June.

Payments to cattle producers will partially offset losses due to COVID-19. A study released recently by Oklahoma State University estimated total losses to the beef cattle industry of \$13.6 billion including \$9.2 billion in 2020 losses. Damage to the cow-calf sector was estimated at \$3.7 billion along with \$2.5 billion in losses to stocker producers and \$3.0 billion in losses to the feedlot sector. Additionally, the cow-calf sector will incur another \$4.4 billion in long-term losses if the 2020 damages are not compensated. For more information about this study check out links to the [executive summary](#) or the [full report](#).

The economic damages estimated in the report are based on information and conditions in early April. Obviously, the COVID-19 situation is not over and additional impacts are likely. Most

recently, workers at several meat packing and further processing facilities have been impacted by COVID-19 resulting in temporary plant closures or reduced production. Expected cattle slaughter dropped to 502 thousand head last week, down 6.3 percent from the week prior (536 thousand head) and down 21.8 percent from the same week last year. Before decreasing sharply the past two weeks, weekly cattle slaughter had averaged 634.3 thousand head per week for the first 14 weeks of the year, up 4.3 percent year over year.

At this time, plant reductions are mostly resulting in some product disruptions and perhaps temporary shortages of fresh meat. Barring a catastrophic combination of plant closures or extended periods of plant disruptions, significant shortages of meat are not expected. However, the combination of processing disruptions and the continuing challenges of supply chain disruptions means that consumers will likely experience limited meat supplies and selection in grocery stores in the coming weeks. Total beef production in 2020 is still projected at a record level over 27 billion pounds but the timing during the year is more volatile and somewhat choppy.

## **Keeping the value of the vaccine dollars**

**Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist**

Adapted from: "Can storage of vaccine affect its efficacy?", Gant Mourer, Cow Calf Corner Newsletter, Oct. 30, 2017

Much has been written recently about the need for a new human vaccine for the coronavirus. Vaccines for several costly diseases of cattle have been in use for some time. Cattle owners need to remind themselves that the vaccines that they buy will be at their utmost effectiveness when first purchased. A vaccine can cost over \$3.00 per dose, and if not stored properly that vaccine can be rendered ineffective. Producers cannot afford to overlook the importance of how they store vaccine and handle it prior to injection.

Biological products should be stored under refrigeration at 35 to 45<sup>0</sup>F unless the nature of the product makes storing at a different temperature advisable (APHIS 2007). If vaccines are not stored within this temperature range, efficacy to the calf can and will be reduced. Killed vaccines are especially susceptible to freezing temperatures. Freezing a killed vaccine will alter the adjuvant or delivery system of a killed vaccine. This, in turn, negatively affects the immune response to the antigen in the vaccine. Modified live viruses (MLV) are more stable but can be in-activated if they are repeatedly cycled above or below the required temperature range (Gunn et al, 2013). Also, once activated by mixing, MLV's effective life will be reduced to 1-2 hours and need to be maintained at the 35<sup>0</sup> to 45<sup>0</sup> F. This can be accomplished by only mixing the doses that you will use at that time and use a cooler to maintain temperature while working cattle.

Researchers from the University of Arkansas and Idaho analyzed the consistency of temperatures for different types, ages and locations of refrigerators over a 48 hour period. They found that only 26.7% and 34.0% of refrigerators were within the acceptable temperature limit 95% of the time, respectfully. Refrigerator location can also affect temperature. Refrigerators located in barns (35.6 <sup>0</sup>F) were colder than in mud rooms (41.72 <sup>0</sup>F) and kitchens (40.82 <sup>0</sup>F). (Troxel and

Barham 2009). Temperature within a 24 hour period can also be highly variable for individual refrigerators. Troxel and Barham (2009) demonstrated some refrigerators may take up to 8 hours to cool down to the 45<sup>0</sup>F, while others will remain too cold varying from 24.8<sup>0</sup>F to 35.6<sup>0</sup>F.

Producers need to be aware of these variations in temperature so they are able to adjust refrigerator temperature as needed. Thermostats can also be very variable from unit to unit, so keeping a thermometer inside works well to monitor and to make adjustments as needed. A simple digital thermometer can be purchased at one of the box stores for about \$10. They can be placed on a shelf inside the refrigerator and easily read each time the door is opened. For more precise monitoring of the temperature, indoor-outdoor thermometers work well to achieve this goal. The outdoor unit can be placed in the refrigerator while the LCD display can be hung with a magnet on the door. This allows temperature to be monitored without opening the door and many models will record the high and the low temperature in a 24 hour period so producers can adjust accordingly.

Much more about vaccine handling, storage, and use can be found in the Oklahoma State University Fact Sheet: [“Use, Handling, and Care of Vaccines” VTMD-9100.](#)

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, sex, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services. References within this publication to any specific commercial product, process, or service by trade name, trademark, service mark, manufacturer, or otherwise does not constitute or imply endorsement by Oklahoma Cooperative Extension Service.